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REF



August 30, 2007
Project 04516-2



Ms. Irene M. Dale
Environmental Engineer
Bureau of Waste Site Cleanup
Department of Environmental Protection
205B Lowell Street
Wilmington, MA 01887

RECEIVED

AUG 31 2007

DEP
NORTHEAST REGIONAL OFFICE

Dear Ms. Dale:

Re: IRA Status Report – Remedial Monitoring Report No. 1
50 Tufts Street Site
Somerville, MA
RTN 3-26114

On behalf of UniFirst Corporation of Wilmington, Massachusetts, GEI Consultants, Inc. is submitting this Remedial Monitoring Report (RMR) No. 1 for the operation of Active Remedial Systems related to the release of chlorinated volatile organic compounds (VOCs) at 50 Tufts Street in Somerville, Massachusetts (Site), see Figure 1. The Site was assigned Release Tracking Number (RTN) 3-26114 by the Massachusetts Department of Environmental Protection (DEP). A sub-slab depressurization system (SSDS) was installed and began operating at the Michael E. Capuano Early Childhood Center (Center) located at 150 Glen Street in Somerville, Massachusetts (see Figure 2) on February 1, 2007 in order to mitigate chlorinated VOCs detected in indoor air at the Center. The Center's SSDS is the subject of this RMR No. 1.

RMR No. 1 covers the monitoring period from February 1, 2007, when the system began operating, to April 30, 2007. This RMR was prepared to meet the requirements of the Massachusetts Contingency Plan (MCP) (310 CMR 40.0000). The original Immediate Response Action (IRA) Transmittal Form (BWSC105) is attached and a copy is included in Attachment A, along with the Interim RMR Checklist. The IRA Status Report No. 1, to which this RMR No. 1 relates, was submitted to the DEP on May 22, 2007.

1 OPERATING STATUS OF ACTIVE REMEDIAL SYSTEM [310 CMR 40.0027(2)(a)]

RMR No. 1 covers the monitoring period from February 1, 2007, when the system began operating, to April 30, 2007.

The SSDS was designed by GEI and installed by the T. Ford Company of Georgetown, Massachusetts. The system consists of pipes connected to a blower to draw vapors from beneath the building and discharge them through an exhaust pipe above the roof. All of the piping except the exhaust pipe is underground. The pipes were installed beneath six classrooms along the southern side of the Center (Rooms 122, 126, 134, 138, 142 and 146). The blower is currently located in a small temporary enclosure on the southern side of the instruction wing (adjacent to rooms 134 and 138) and will be operated there until the mechanical equipment can be moved to another suitable permanent location, see Figure 3.

REF
354.353
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Sub-slab soil gas monitoring points were installed inside the building at six locations to monitor the effectiveness of the SSDS. The six monitoring points were installed in the bathrooms of classrooms 122, 126, 133, 137, 142 and 146.

2 DATE AND NUMBER OF MONITORING EVENTS [310 CMR 40.0027(2)(b)]

During the monitoring period, we monitored influent and effluent concentrations 17 times. The dates of the monitoring events are shown in Table 1 and inspection logs are included in Attachment B. Photoionization detector measurements of the SSDS influent and effluent total VOC concentrations are in Table 2, and in Graph 1 in Attachment C.

Between February 1 and April 30, 2007, GEI monitored indoor air and sub-slab vapor concentrations at the Center. Sub-slab vapor and indoor air monitoring results are summarized on Tables 2 and 3, respectively. Sub-slab soil vapor monitoring results are presented on Graphs 2 through 8 in Attachment C. Laboratory data were submitted in IRA Status Report No. 1. Chlorinated VOCs were not detected above the laboratory detection limit in indoor air samples collected at the Center following the start up of the Center's SSDS.

3 EFFLUENT CONCENTRATIONS [310 CMR 40.0027(2)(c)]

The SSDS effluent was sampled on February 8, 2007 and submitted for chemical testing for VOCs by Method TO-15. The total concentrations of VOCs detected in the SSDS effluent was approximately 1725 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) (Table 4 and Table 5). Blower air flow rate was estimated from differential pressure readings of the exhaust pipe.

4 IDENTIFICATION OF DISCHARGES ABOVE PERMISSIBLE DISCHARGE CONCENTRATIONS [310 CMR 40.0027(2)(d)]

The regulatory requirements for off-gas treatment for remedial air emissions are presented in DEP's Policy No. WSC-94-150, "Off-Gas Treatment of Point-Source Remedial Air Emissions." The DEP policy states that off-gas contaminant treatment is not required for SSDSs that produce a total air emission rate of volatile contaminants of less than 100 pounds per year (lbs/yr). Based on the sub-slab soil gas VOC concentrations, we estimated that the system would produce significantly less than 100 lbs/yr of VOCs and therefore did not install off-gas treatment processes. We calculated the total mass of VOCs discharged by the system to be approximately 6.1 lbs/yr of VOCs, based on the total concentration of VOCs detected in the SSDS effluent on February 8, 2007 and the effluent flow rate. The air emission rate calculation is presented in Table 5.

5 RECOVERY RATES AND/OR VOLUMES [310 CMR 40.0027(2)(e)]

There is no vapor, liquid or solid recovery associated with the operation of the Active Remedial System.

6 DISCHARGE VOLUMES [310 CMR 40.0027(2)(f)]

The volume of effluent discharged is not calculated as part of the operation of the Active Remedial System.

7 DATE, LOCATION, TYPE AND VOLUME OF REMEDIAL ADDITIVES APPLICATIONS [310 CMR 40.0027(2)(g)]

No remedial additives have been applied as part of the Active Remedial System.

8 GROUNDWATER DATA [310 CMR 40.0027(2)(h)]

No groundwater data has been collected as part of this Active Remedial System.

9 RELATED MAPS, GRAPHS OR DIAGRAMS [310 CMR 40.0027(2)(i)]

Related tables, maps and inspection logs are included as attachments and referenced in this report.

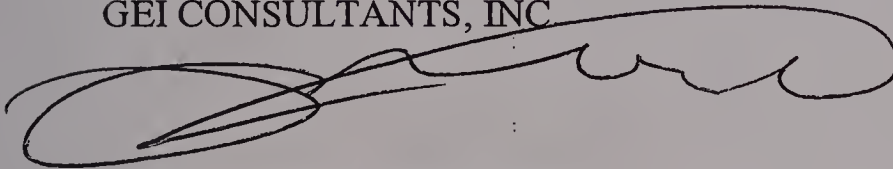
10 LIMITATIONS

This report was prepared for the use of UniFirst, exclusively. The conclusions presented in this report are based solely on the information reported in this document. Additional quantitative information regarding the Site that was not available to us may result in a modification of the findings above. The report has been prepared in accordance with generally accepted geohydrological practices. No warranty, expressed or implied, is made.

Please contact me at (781) 721-4012 or at igladstone@geiconsultants.com if you have any questions regarding this RMR No. 1.

Very truly yours,

GEI CONSULTANTS, INC



Ileen S. Gladstone, P.E., LSP
Vice President

WFS/ISG:jh

Attachments:

- Table 1: Summary of Monitoring Events
- Table 2: PID Monitoring Data
- Table 3: Summary of Testing Results – Indoor Air Samples
- Table 4: Summary of Testing Results – Effluent Air Samples
- Table 5: Summary of Estimated SSDS Discharge Rates
- Figure 1: Site Location Map
- Figure 2: 50 Tufts Street Site Plan
- Figure 3: Capuano Center Site Plan
- Attachment A: BWSC105 and Interim RMR Checklist
- Attachment B: Weekly Mechanical Inspection Log for Capuano Center
- Attachment C: Graphs of SSDS and Sub-Slab Total VOC Concentrations
- Attachment D: Capuano Center SSDS Field Monitoring Reports

c: Stephen Aquilino, UniFirst
Peter Mills, City of Somerville



Geotechnical
Environmental and
Water Resources
Engineering



Table 1
Summary of Monitoring Events: February 1, 2007 - April 30, 2007
Capuano Center
Somerville, Massachusetts

| Monitoring Date | Monitoring Event per RMR Report Period | Type of Monitoring Event | SSDS Field Parameters Measured | Samples Collected (yes/no)? |
|-----------------|--|---------------------------------------|--|-----------------------------|
| 2/1/2007 | 1 | Post-SSDS Start-Up (Daily for 1 week) | -Pressure and VOC concentrations at interior sub-slab monitoring points -Pressure and VOC concentrations at central extraction pipe from each classroom. | No |
| 2/2/2007 | 2 | Post-SSDS Start-Up (Daily for 1 week) | -Pressure and VOC concentrations at interior sub-slab monitoring points -Pressure and VOC concentrations at exterior extraction pipes. | No |
| 2/3/2007 | 3 | Post-SSDS Start-Up (Daily for 1 week) | -Pressure and VOC concentrations at interior sub-slab monitoring points -Pressure and VOC concentrations at exterior extraction pipes. | No |
| 2/4/2007 | 4 | Post-SSDS Start-Up (Daily for 1 week) | -Pressure and VOC concentrations at interior sub-slab monitoring points -Pressure and VOC concentrations at exterior extraction pipes. | No |
| 2/5/2007 | 5 | Post-SSDS Start-Up (Daily for 1 week) | -Pressure and VOC concentrations at interior sub-slab monitoring points -Pressure and VOC concentrations at central extraction pipe from each classroom. -Pressure and VOC concentrations at manifold pipes, combined influent, and effluent pipes. | No |
| 2/6/2007 | 6 | Post-SSDS Start-Up (Daily for 1 week) | -Pressure and VOC concentrations at interior sub-slab monitoring points -Pressure and VOC concentrations at central extraction pipe from each classroom. -Pressure and VOC concentrations at manifold pipes, combined influent, and effluent pipes. | No |
| 2/7/2007 | 7 | Post-SSDS Start-Up (Daily for 1 week) | -Pressure and VOC concentrations at interior sub-slab monitoring points -Pressure and VOC concentrations at central extraction pipe from each classroom. -Pressure and VOC concentrations at manifold pipes, combined influent, and effluent pipes. | Yes |
| 2/8/2007 | 8 | Post-SSDS Start-Up (Daily for 1 week) | -Pressure and VOC concentrations at interior sub-slab monitoring points -Pressure and VOC concentrations at exterior extraction pipes. -Pressure and VOC concentrations at manifold pipes, combined influent, and effluent pipes. | Yes |
| 2/20/2007 | 9 | SSDS Weekly Mechanical Inspection | -Pressure and VOC concentrations at each manifold pipe, the combined influent, and effluent pipes -System Flow Rate | No |
| 3/1/2007 | 10 | SSDS Weekly Mechanical Inspection | -Pressure and VOC concentrations at each manifold pipe, the combined influent, and effluent pipes -System Flow Rate | No |
| 3/8/2007 | 11 | SSDS Monthly Monitoring | -Pressure and VOC concentrations at interior sub-slab monitoring points -Pressure and VOC concentrations at exterior extraction pipes. -Pressure and VOC concentrations at manifold pipes, combined influent, and effluent pipes. -System Flow Rate | Yes |
| 3/14/2007 | 12 | SSDS Weekly Mechanical Inspection | -Pressure and VOC concentrations at each manifold pipe, the combined influent, and effluent pipes -System Flow Rate | No |
| 3/22/2007 | 13 | SSDS Weekly Mechanical Inspection | -Pressure and VOC concentrations at each manifold pipe, the combined influent, and effluent pipes -System Flow Rate | No |
| 3/29/2007 | 14 | SSDS Weekly Mechanical Inspection | -Pressure and VOC concentrations at each manifold pipe, the combined influent, and effluent pipes -System Flow Rate | No |
| 4/6/2007 | 15 | SSDS Weekly Mechanical Inspection | -Pressure and VOC concentrations at each manifold pipe, the combined influent, and effluent pipes -System Flow Rate | No |

Table 1
Summary of Monitoring Events: February 1, 2007 - April 30, 2007
Capuano Center
Somerville, Massachusetts

| Monitoring Date | Monitoring Event per RMR Report Period | Type of Monitoring Event | SSDS Field Parameters Measured | Samples Collected (yes/no)? |
|-----------------|--|-----------------------------------|---|-----------------------------|
| 4/20/2007 | 16 | SSDS Monthly Monitoring | -Pre-sampling HVAC inspection -Pressure and VOC concentrations at interior sub-slab monitoring points -Pressure and VOC concentrations at exterior extraction pipes. -Pressure and VOC concentrations at manifold pipes, combined influent, and effluent pipes. -System Flow Rate | Yes |
| 4/27/2007 | 17 | SSDS Weekly Mechanical Inspection | -Pressure and VOC concentrations at each manifold pipe, the combined influent, and effluent pipes -System Flow Rate | No |

Notes:

1. RMR = Remedial Monitoring Report.
2. SSDS = Sub-Slab Depressurization System.
3. VOCs = Volatile Organic Compounds.
4. HVAC = Heating, Ventilation, and Air Conditioning system.
5. VOC measurements collected with a ppb-RAE calibrated to 10 parts per million (ppm) isobutylene.
6. Pressure readings collected using a Dwyer 475-000-FM manometer.

Table 2
PID Monitoring Data: January 31 - April 30, 2007
Capuano Center
Sommerville, MA

| Date | Interior Sub-Slab Monitoring Points | | | | | | Blower Enclosure Monitoring Points | | | | Effluent |
|---------|-------------------------------------|-----------|-----------|-----------|-----------|-----------|------------------------------------|-------------|-------------|-------------------|----------|
| | Room 122A | Room 126A | Room 133A | Room 137A | Room 142A | Room 146A | Manifold 12 | Manifold 13 | Manifold 14 | Combined Influent | |
| 1/31/07 | 440 | 641 | 469 | 800 | 412 | 3,400 | NM | NM | NM | NM | NM |
| 2/1/07 | 492,000 | 305,000 | 975,000 | 1,244,000 | 210 | 331,000 | NM | NM | NM | NM | NM |
| 2/2/07 | 1,700 | 6,200 | 4,000 | 2,400 | 11,100 | 47,000 | 0 | 0 | 1,100 | 2,000 | 1,400 |
| 2/3/07 | 1,328 | 5,468 | 2,081 | 1,328 | 1,743 | 2,213 | 183 | 652 | 317 | 1,090 | 785 |
| 2/4/07 | 746 | 4,750 | 297 | 652 | 1,255 | 2,565 | 241 | 436 | 328 | 528 | 456 |
| 2/5/07 | 272 | 1,951 | 1,164 | 1,595 | 1,955 | 1,538 | 213 | 474 | 412 | 483 | 472 |
| 2/6/07 | 613 | 3,563 | 1,299 | 1,967 | 2,412 | 12,100 | 285 | 4,479 | 787 | 633 | 669 |
| 2/7/07 | NM | NM | NM | NM | NM | NM | 1,715 | 993 | 1,385 | 738 | 979 |
| 2/8/07 | 974 | 3,392 | 933 | 1,399 | 786 | 4,395 | 118 | 147 | 153 | 192 | 180 |
| 3/1/07 | NM | NM | NM | NM | NM | NM | 800 | 1,000 | 1,000 | 800 | 1,000 |
| 3/8/07 | 417 | 580 | 441 | 270 | 151 | 1,176 | 958 | 425 | 602 | 534 | 428 |
| 3/14/07 | NM | NM | NM | NM | NM | NM | 22 | 273 | 111 | 163 | 86 |
| 3/22/07 | NM | NM | NM | NM | NM | NM | 144 | 0 | 0 | 0 | 1,058 |
| 3/29/07 | NM | NM | NM | NM | NM | NM | 85 | 0 | 0 | 0 | 600 |
| 4/6/07 | NM | NM | NM | NM | NM | NM | 21 | 115 | 70 | 43 | 41 |
| 4/27/07 | 195 | 14,000 | 4,145 | 6,150 | 1,250 | 3,725 | 37 | 169 | 152 | 151 | 128 |

General Notes:

1. All measurements were collected with a photoionization detector (PID) calibrated to isobutylene and are listed in parts per billion by volume (ppbv).

Qualifying Notes:

NM = Not Measured

Table 3
Summary of Testing Results - Indoor Air Samples: February 1, 2007 - April 30, 2007
Capuano Center
Somerville, Massachusetts

| Sample Location: Sample Name: Sample Date: Collected By: | | Room 122 | | Room 126 | | | | | | Room 134 | | Room 138 | | | | | | | | | | | |
|---|--------|-------------------|--------|-------------------|--------|-------------------|-------|-------------------|--------|-------------------|--------|-------------------|--------|--|---------|-------------------|-------|--|-------|-------------------|-------|--|-------|
| | | 150-Glen-Rm 122 | | 150 Glen-Rm 126 | | 150 Glen-Rm 126 | | 150 Glen-Rm 126 | | 150 Glen-Rm 134 | | 150 Glen-Rm 138 | | 150 Glen-Rm 139 (Field Duplicate of 150-Glen-Rm 138) | | 150-Glen-Rm 138 | | 150-Glen-Rm 139 (Field Duplicate of 150-Glen-Rm 138) | | 150-Glen-Rm 138 | | 150-Glen-Rm 139 (Field Duplicate of 150-Glen-Rm 138) | |
| | | 2/7/2007 GEI | | 2/7/2007 GEI | | 3/8/2007 GEI | | 4/20/2007 GEI | | 2/7/2007 GEI | | 2/7/2007 GEI | | 2/7/2007 GEI | | 3/8/2007 GEI | | 3/8/2007 GEI | | 4/20/2007 GEI | | 4/20/2007 GEI | |
| | | µg/m ³ | ppbv | µg/m ³ | ppbv | µg/m ³ | ppbv | µg/m ³ | ppbv | µg/m ³ | ppbv | µg/m ³ | ppbv | µg/m ³ | ppbv | µg/m ³ | ppbv | µg/m ³ | ppbv | µg/m ³ | ppbv | µg/m ³ | ppbv |
| Analyte | Method | | | | | | | | | | | | | | | | | | | | | | |
| Volatile Organic Compounds (VOCs) | | TO-15 | | | | | | | | | | | | | | | | | | | | | |
| Carbon tetrachloride | | 0.69 J | 0.11 J | 0.94 J | 0.15 J | <1.3 | <0.20 | < 1.3 | < 0.20 | 0.94 J | 0.15 J | 0.75 J | 0.12 J | 0.52 J | 0.082 J | <1.3 | <0.20 | <1.3 | <0.20 | < 1.3 | <0.20 | < 1.3 | <0.20 |
| 1,1-Dichloroethane | | < 0.81 | < 0.20 | < 0.81 | < 0.20 | <0.81 | <0.20 | < 0.81 | < 0.20 | < 0.81 | < 0.20 | < 0.81 | < 0.20 | < 0.81 | < 0.20 | <0.81 | <0.20 | <0.81 | <0.20 | < 0.81 | <0.20 | < 0.81 | <0.20 |
| 1,1-Dichloroethylene | | < 0.79 | < 0.20 | < 0.79 | < 0.20 | <0.79 | <0.20 | < 0.79 | < 0.20 | < 0.79 | < 0.20 | < 0.79 | < 0.20 | < 0.79 | < 0.20 | <0.79 | <0.20 | <0.79 | <0.20 | < 0.79 | <0.20 | < 0.79 | <0.20 |
| 1,2-Dichloroethane | | < 0.81 | < 0.20 | < 0.81 | < 0.20 | <0.81 | <0.20 | < 0.81 | < 0.20 | < 0.81 | < 0.20 | < 0.81 | < 0.20 | < 0.81 | < 0.20 | <0.81 | <0.20 | <0.81 | <0.20 | < 0.81 | <0.20 | < 0.81 | <0.20 |
| cis,1,2-Dichloroethene | | < 0.79 | < 0.20 | < 0.79 | < 0.20 | <0.79 | <0.20 | < 0.79 | < 0.20 | < 0.79 | < 0.20 | < 0.79 | < 0.20 | < 0.79 | < 0.20 | <0.79 | <0.20 | <0.79 | <0.20 | < 0.79 | <0.20 | < 0.79 | <0.20 |
| Tetrachloroethylene (PCE) | | < 1.4 | < 0.20 | < 1.4 | < 0.20 | < 1.4 | <0.20 | < 1.4 | < 0.20 | < 1.4 | < 0.20 | < 1.4 | < 0.20 | < 1.4 | < 0.20 | < 1.4 | <0.20 | < 1.4 | <0.20 | < 1.4 | <0.20 | < 1.4 | <0.20 |
| 1,1,1-Trichloroethane | | < 1.1 | < 0.20 | < 1.1 | < 0.20 | < 1.1 | <0.20 | < 1.1 | < 0.20 | < 1.1 | < 0.20 | < 1.1 | < 0.20 | < 1.1 | < 0.20 | < 1.1 | <0.20 | < 1.1 | <0.20 | < 1.1 | <0.20 | < 1.1 | <0.20 |
| Trichloroethylene (TCE) | | < 1.1 | < 0.20 | < 1.1 | < 0.20 | < 1.1 | <0.20 | < 1.1 | < 0.20 | < 1.1 | < 0.20 | < 1.1 | < 0.20 | < 1.1 | < 0.20 | < 1.1 | <0.20 | < 1.1 | <0.20 | < 1.1 | <0.20 | < 1.1 | <0.20 |

- General Notes**
- 1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the laboratory data sheets.
 - 2. µg/m³ = micrograms per cubic meter.
 - 3. ppbv = parts per billion by volume.
 - 4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.

- Qualifying Notes**
- J The reported result is below the laboratory reporting limit and is estimated.

Table 3
Summary of Testing Results - Indoor Air Samples: February 1, 2007 - April 30, 2007
Capuano Center
Somerville, Massachusetts

| Sample Location: | | Room 141 | | | | Room 142 | | | | | | Room 146 | | | | | |
|-----------------------------------|--------|-----------------|-------|-----------------|-------|-----------------|--------|-----------------|-------|-----------------|-------|-----------------|--------|-----------------|-------|-----------------|-------|
| Sample Name: | | 150-Glen-Rm 141 | | 150-Glen-Rm 141 | | 150 Glen-Rm 142 | | 150-Glen-Rm 142 | | 150-Glen-Rm 142 | | 150-Glen-Rm 146 | | 150-Glen-Rm 146 | | 150-Glen-Rm 146 | |
| Sample Date: | | 3/8/2007 | | 4/20/2007 | | 2/7/2007 | | 3/8/2007 | | 4/20/2007 | | 2/7/2007 | | 3/8/2007 | | 4/20/2007 | |
| Collected By: | | GEI | | GEI | | GEI | | GEI | | GEI | | GEI | | GEI | | GEI | |
| Units: | | µg/m³ | ppbv | µg/m³ | ppbv | µg/m³ | ppbv | µg/m³ | ppbv | µg/m³ | ppbv | µg/m³ | ppbv | µg/m³ | ppbv | µg/m³ | ppbv |
| Analyte | Method | | | | | | | | | | | | | | | | |
| Volatile Organic Compounds (VOCs) | TO-15 | | | | | | | | | | | | | | | | |
| Carbon tetrachloride | | <1.3 | <0.20 | <1.3 | <0.20 | 0.82 J | 0.13 J | <1.3 | <0.20 | <1.3 | <0.20 | 0.75 J | 0.12 J | <1.3 | <0.20 | <1.3 | <0.20 |
| 1,1-Dichloroethane | | <0.81 | <0.20 | <0.81 | <0.20 | < 0.81 | < 0.20 | <0.81 | <0.20 | <0.81 | <0.20 | < 0.81 | < 0.20 | <0.81 | <0.20 | <0.81 | <0.20 |
| 1,1-Dichloroethylene | | <0.79 | <0.20 | <0.79 | <0.20 | < 0.79 | < 0.20 | <0.79 | <0.20 | <0.79 | <0.20 | < 0.79 | < 0.20 | <0.79 | <0.20 | <0.79 | <0.20 |
| 1,2-Dichloroethane | | <0.81 | <0.20 | <0.81 | <0.20 | < 0.81 | < 0.20 | <0.81 | <0.20 | <0.81 | <0.20 | < 0.81 | < 0.20 | <0.81 | <0.20 | <0.81 | <0.20 |
| cis,1,2-Dichloroethene | | <0.79 | <0.20 | <0.79 | <0.20 | < 0.79 | < 0.20 | <0.79 | <0.20 | <0.79 | <0.20 | < 0.79 | < 0.20 | <0.79 | <0.20 | <0.79 | <0.20 |
| Tetrachloroethylene (PCE) | | < 1.4 | <0.20 | < 1.4 | <0.20 | < 1.4 | < 0.20 | < 1.4 | <0.20 | < 1.4 | <0.20 | < 1.4 | < 0.20 | < 1.4 | <0.20 | < 1.4 | <0.20 |
| 1,1,1-Trichloroethane | | < 1.1 | <0.20 | < 1.1 | <0.20 | < 1.1 | < 0.20 | < 1.1 | <0.20 | < 1.1 | <0.20 | < 1.1 | < 0.20 | < 1.1 | <0.20 | < 1.1 | <0.20 |
| Trichloroethylene (TCE) | | < 1.1 | <0.20 | < 1.1 | <0.20 | < 1.1 | < 0.20 | < 1.1 | <0.20 | < 1.1 | <0.20 | < 1.1 | < 0.20 | < 1.1 | <0.20 | < 1.1 | <0.20 |

General Notes

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the laboratory data sheets.
2. µg/m³ = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.

Qualifying Notes

- J The reported result is below the laboratory reporting limit and is estimated.

Table 4

Summary of Testing Results - Effluent Air Samples: February 1, 2007 - April 30, 2007
 Capuano Center
 Somerville, Massachusetts

| Sample Location: Sample Name: Sample Date: Collected By: | | Blower Effluent | | Downwind on Roof | | | | | | | |
|---|--------|-----------------------------------|--------|-------------------------------|--------|---------------------------------|--------|-------------------------------|--------|--------------------------------|--------|
| | | 150Glen-Effluent 2/8/07 GEI | | 150Glen-Roof 2/8/07 GEI | | 150Glen-Roof B 2/8/07 GEI | | 150Glen-Roof 3/8/07 GEI | | 150Glen-Roof 4/20/07 GEI | |
| | | µg/m ³ | ppbv | µg/m ³ | ppbv | µg/m ³ | ppbv | µg/m ³ | ppbv | µg/m ³ | ppbv |
| Analyte | Method | Units: | | | | | | | | | |
| Volatile Organic Compounds (VOCs) | | TO-15 | | | | | | | | | |
| Acetone | | 45.4 | 19.1 B | NT | NT | NT | NT | NT | NT | NT | NT |
| Carbon tetrachloride | | < 1.3 | < 0.20 | < 1.3 | < 0.20 | < 1.3 | < 0.20 | < 1.3 | < 0.20 | < 1.3 | < 0.20 |
| 1,1-Dichloroethane | | 24 | 6 | < 0.81 | < 0.20 | < 0.81 | < 0.20 | < 0.81 | < 0.20 | < 0.81 | < 0.20 |
| 1,1-Dichloroethylene | | 10 | 2.6 | < 0.79 | < 0.20 | < 0.79 | < 0.20 | < 0.79 | < 0.20 | < 0.79 | < 0.20 |
| 1,2-Dichloroethane | | < 0.81 | < 0.20 | < 0.81 | < 0.20 | < 0.81 | < 0.20 | < 0.81 | < 0.20 | < 0.81 | < 0.20 |
| cis,1,2-Dichloroethene | | 15 | 3.8 | < 0.79 | < 0.20 | < 0.79 | < 0.20 | < 0.79 | < 0.20 | < 0.79 | < 0.20 |
| Methyl ethyl ketone | | 380 S | 129 S | NT | NT | NT | NT | NT | NT | NT | NT |
| Tetrachloroethylene (PCE) | | 577 S | 85.1 S | < 1.4 | < 0.20 | < 1.4 | < 0.20 | < 1.4 | < 0.20 | < 1.4 | < 0.20 |
| Tetrahydrofuran | | 571 S | 194 S | NT | NT | NT | NT | NT | NT | NT | NT |
| 1,1,1-Trichloroethane | | 3.9 | 0.72 | < 1.1 | < 0.20 | < 1.1 | < 0.20 | < 1.1 | < 0.20 | < 1.1 | < 0.20 |
| Trichloroethylene (TCE) | 98.3 | 18.3 | < 1.1 | < 0.20 | < 1.1 | < 0.20 | < 1.1 | < 0.20 | < 1.1 | < 0.20 | |

General Notes

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the laboratory data sheets.
2. $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
5. NT = The sample was not tested for this analyte.

Qualifying Notes

- S The result is estimated due to Internal Standard recovery outside of the control limits.
- B Compound present in the associated method blank.

Table 5
Summary of Estimated SSDS Discharge Rates
Capuano Center
Somerville, Massachusetts

| VARIABLE | UNITS | CAPUANO CENTER |
|--|----------------------------|----------------|
| Total Chlorinated VOC Effluent Concentration | $\mu\text{g}/\text{m}^3$ | 1,725 |
| | kg/m^3 | 0.000001725 |
| | lbs/m^3 | 0.000003795 |
| | lbs/cf | 1.07507E-07 |
| Effluent Flow Rate | cfm | 108 |
| Estimated VOC Mass Discharge | lbs/minute | 1.16108E-05 |
| | lbs/day | 0.016719501 |
| | lbs/year | 6.1 |

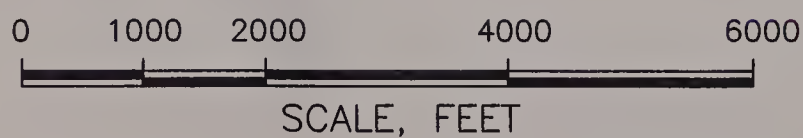
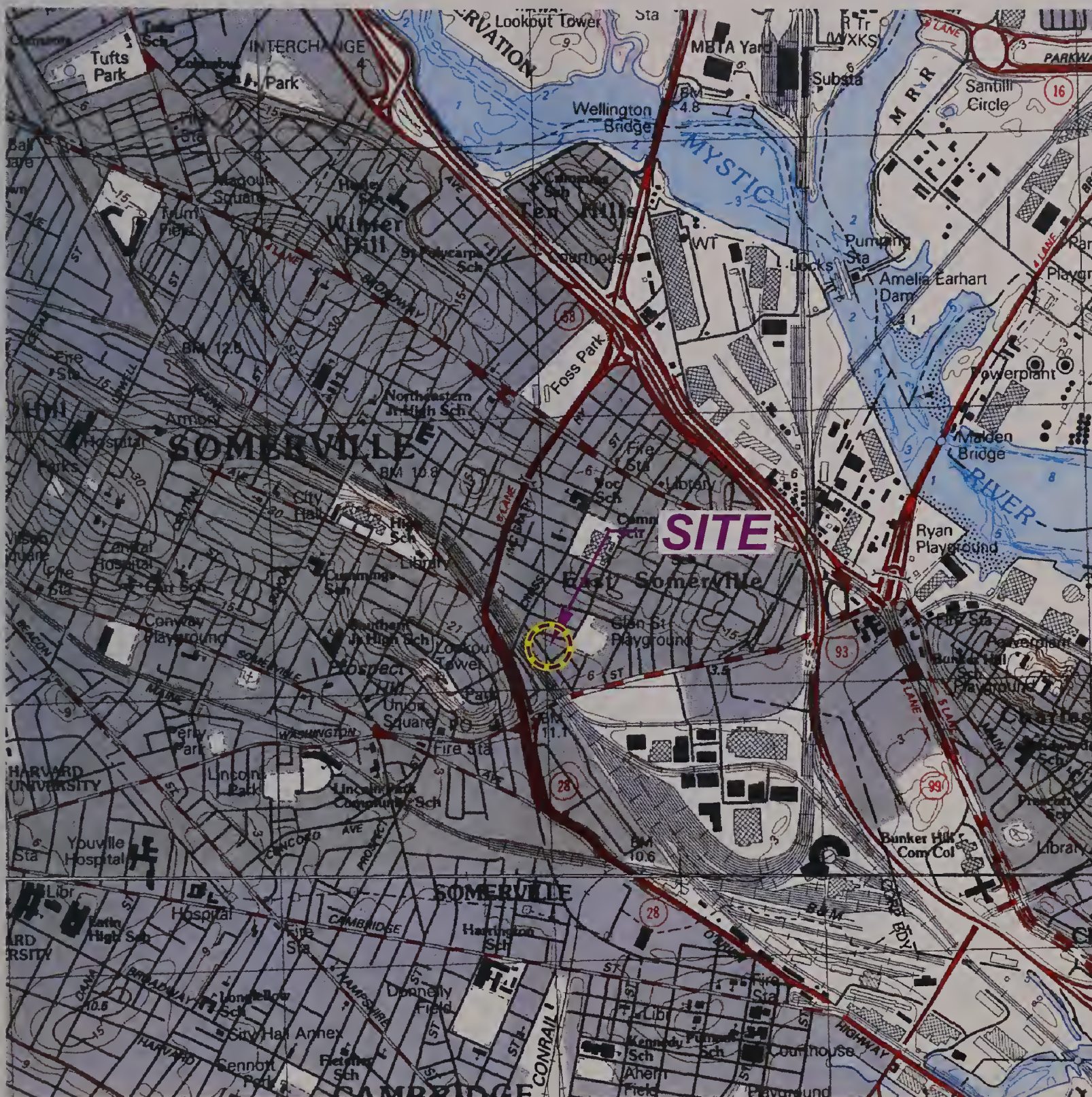
Notes:

1. Total chlorinated volatile organic compounds (VOCs) calculated from February 8, 2007 effluent air sample.
2. Effluent flow rate derived from differential pressure readings of the exhaust stack pipe.
3. $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter.
4. kg/m^3 = kilograms per cubic meter.
5. lbs/m^3 = pounds per cubic meter.
6. cfm = cubic feet per minute.
7. Conversion factors used: $1 \mu\text{g} = 1 \times 10^{-9} \text{ kg}$, $1 \text{ kg} = 2.2 \text{ lbs}$, $1 \text{ m} = 3.28 \text{ ft}$, $1 \text{ m}^3 = 35.3 \text{ cf}$



Geotechnical
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This Image provided by MassGIS is taken from
U.S.G.S. Topographic 7.5 X 15 Minute Series
Boston North, MA Quadrangle, 1985.
Datum is National Geodetic Vertical Datum (NGVD).
Contour Interval is 3 Meters.

Remedial Monitoring Report No. 1
50 Tufts Street
Somerville, Massachusetts

UniFirst Corporation
Wilmington, Massachusetts



SITE LOCATION MAP

Project 04516-2

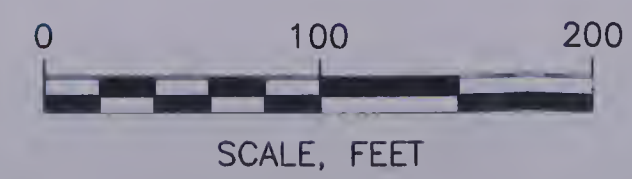
August 2007

Fig. 1



LEGEND:
RESIDENCES AND BUILDINGS TO BE EVALUATED

- GENERAL NOTES:**
- 1. BUILDINGS, STREET, AND PROPERTY LINES BASED ON SOMERVILLE ASSESSORS MAPS AND ARE BEST FIT RELATIVE TO THE LOCATION OF THE 50 TUFTS ST. BUILDING.
 - 2. CAPUANO CENTER BUILDING IS BASED ON DRAWING A0.2 FROM THE ARCHITECTURAL BID SET OF "THE EDGERTY EARLY CHILDHOOD DEVELOPMENT CENTER" BY HMFH ARCHITECTS, INC., DATED AUGUST 10, 2001.



| | | | | |
|--|--|--|----------------------|-------------|
| Remedial Monitoring Report No. 1 50 Tufts Street Somerville, Massachusetts | | | 50 TUFTS STREET SITE | |
| UniFirst Corporation Wilmington, Massachusetts | | | Project 04516-2 | August 2007 |

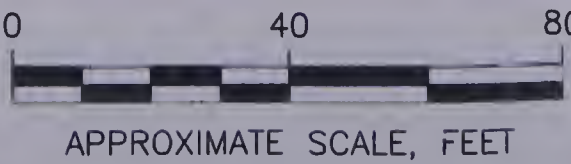
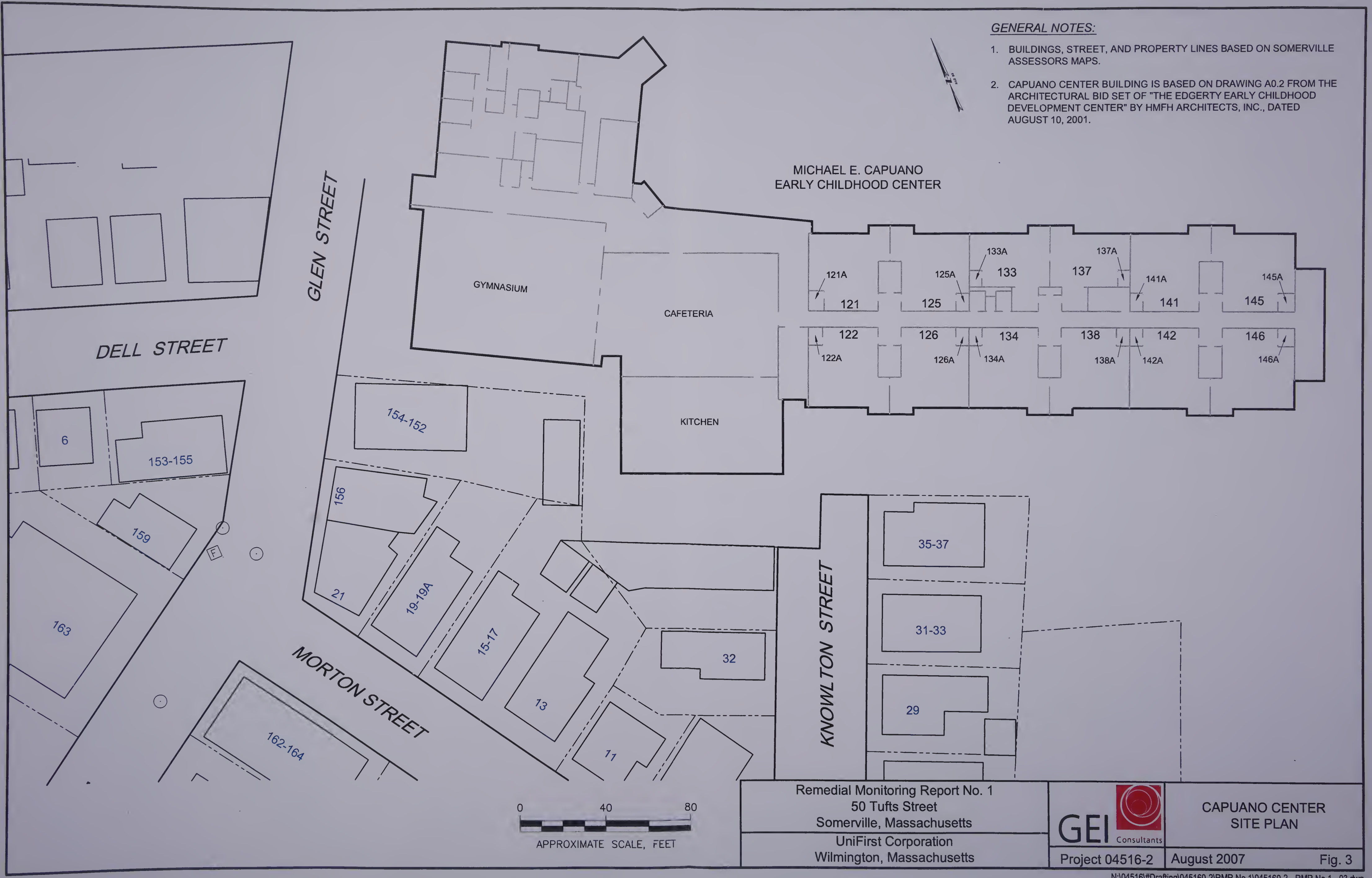
Fig. 2


GENERAL NOTES:

1. BUILDINGS, STREET, AND PROPERTY LINES BASED ON SOMERVILLE ASSESSORS MAPS.
2. CAPUANO CENTER BUILDING IS BASED ON DRAWING A0.2 FROM THE ARCHITECTURAL BID SET OF "THE EDGERTY EARLY CHILDHOOD DEVELOPMENT CENTER" BY HMFH ARCHITECTS, INC., DATED AUGUST 10, 2001.



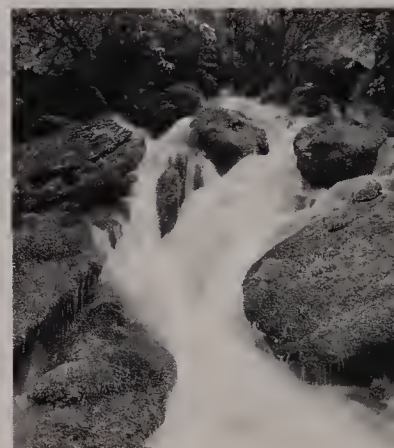
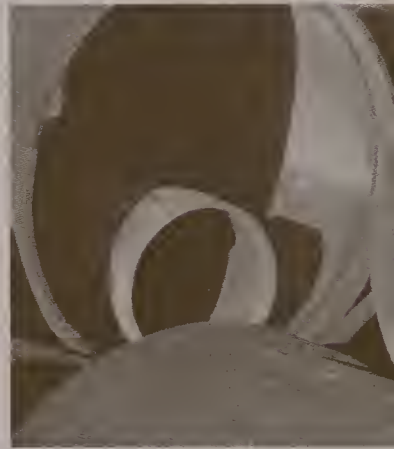
MICHAEL E. CAPUANO
EARLY CHILDHOOD CENTER



| | | | | |
|--|--|---|-----------------------------|-------------|
| Remedial Monitoring Report No. 1 50 Tufts Street Somerville, Massachusetts | |  GEI Consultants | CAPUANO CENTER SITE PLAN | |
| UniFirst Corporation Wilmington, Massachusetts | | | Project 04516-2 | August 2007 |



Geotechnical
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ATTACHMENT A
BWSC105 and Interim RMR Checklist



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC105

**IMMEDIATE RESPONSE ACTION (IRA) TRANSMITTAL
FORM**

Pursuant to 310 CMR 40.0424 - 40.0427 (Subpart D)

Release Tracking Number

3

-

26114

A. RELEASE OR THREAT OF RELEASE LOCATION:

1. Release Name/Location Aid: _____
2. Street Address: 50 Tufts Street
3. City/Town: Somerville 4. ZIP Code: 02149
5. UTM Coordinates: a. UTM N: 4694322 b. UTM E: 328049
- ☐ 6. Check here if a Tier Classification Submittal has been provided to DEP for this disposal site.
☐ a. Tier IA ☐ b. Tier IB ☐ c. Tier IC ☐ d. Tier II
- ☐ 7. Check here if this location is Adequately Regulated, pursuant to 310 CMR 40.0110-0114. Specify Program (check one):
☐ a. CERCLA ☐ b. HSWA Corrective Action ☐ c. Solid Waste Management
☐ d. RCRA State Program (21C Facilities)

B. THIS FORM IS BEING USED TO: (check all that apply)

1. List Submittal Date of Initial IRA Written Plan (if previously submitted): 11/13/2006
(mm/dd/yyyy)
- ☐ 2. Submit an **Initial IRA Plan**.
- ☐ 3. Submit a **Modified IRA Plan** of a previously submitted written IRA Plan.
- ☐ 4. Submit an **Imminent Hazard Evaluation**. (check one)
☐ a. An Imminent Hazard exists in connection with this Release or Threat of Release.
☐ b. An Imminent Hazard does not exist in connection with this Release or Threat of Release.
☐ c. It is unknown whether an Imminent Hazard exists in connection with this Release or Threat of Release, and further assessment activities will be undertaken.
☐ d. It is unknown whether an Imminent Hazard exists in connection with this Release or Threat of Release. However, response actions will address those conditions that could pose an Imminent Hazard.
- ☐ 5. Submit a request to **Terminate an Active Remedial System or Response Action(s) Taken to Address an Imminent Hazard**.
- ☐ 6. Submit an **IRA Status Report**.
- ☒ 7. Submit a **Remedial Monitoring Report**. (This report can only be submitted through eDEP.)
a. Type of Report: (check one) ☒ i. Initial Report ☐ ii. Interim Report ☐ iii. Final Report
b. Frequency of Submittal: (check all that apply)
☐ i. A Remedial Monitoring Report(s) submitted monthly to address an Imminent Hazard.
☒ ii. A Remedial Monitoring Report(s) submitted monthly to address a Condition of Substantial Release Migration.
☒ iii. A Remedial Monitoring Report(s) submitted concurrent with a IRA Status Report.
c. Number of Remedial Systems and/or Monitoring Programs: 1

A separate BWSC105A, IRA Remedial Monitoring Report, must be filled out for each Remedial System and/or Monitoring Program addressed by this transmittal form.



**IMMEDIATE RESPONSE ACTION (IRA) TRANSMITTAL
FORM** Pursuant to 310 CMR 40.0424 - 40.0427 (Subpart D)

Release Tracking Number

3 - 26114

B. THIS FORM IS BEING USED TO (cont.): (check all that apply)

☐ 8. Submit an **IRA Completion Statement**.

☐ a. Check here if future response actions addressing this Release or Threat of Release notification condition will be conducted as part of the Response Actions planned or ongoing at a Site that has already been Tier Classified under a different Release Tracking Number (RTN). When linking RTNs, rescoring via the NRS is required if there is a reasonable likelihood that the addition of the new RTN(s) would change the classification of the site.

b. Provide Release Tracking Number of Tier Classified Site (Primary RTN):

-

These additional response actions must occur according to the deadlines applicable to the Primary RTN. Use the Primary RTN when making all future submittals for the site unless specifically relating to this Immediate Response Action.

☐ 9. Submit a **Revised IRA Completion Statement**.

(All sections of this transmittal form must be filled out unless otherwise noted above)

C. RELEASE OR THREAT OF RELEASE CONDITIONS THAT WARRANT IRA:

1. Identify Media Impacted and Receptors Affected: (check all that apply)

- ☒ a. Air ☒ b. Basement ☒ c. Critical Exposure Pathway ☒ d. Groundwater ☒ e. Residence
☐ f. Paved Surface ☐ g. Private Well ☐ h. Public Water Supply ☒ i. School ☐ j. Sediments
☐ k. Soil ☐ l. Storm Drain ☐ m. Surface Water ☐ n. Unknown ☐ o. Wetland ☐ p. Zone 2
☐ q. Others Specify: _____

2. Identify Oils and Hazardous Materials Released: (check all that apply)

- ☐ a. Oils ☒ b. Chlorinated Solvents ☐ c. Heavy Metals
☐ d. Others Specify: _____

D. DESCRIPTION OF RESPONSE ACTIONS: (check all that apply, for volumes list cumulative amounts)

- | | |
|--|---|
| <input type="checkbox"/> 1. Assessment and/or Monitoring Only | <input type="checkbox"/> 2. Temporary Covers or Caps |
| <input type="checkbox"/> 3. Deployment of Absorbent or Containment Materials | <input type="checkbox"/> 4. Temporary Water Supplies |
| <input checked="" type="checkbox"/> 5. Structure Venting System | <input type="checkbox"/> 6. Temporary Evacuation or Relocation of Residents |
| <input type="checkbox"/> 7. Product or NAPL Recovery | <input type="checkbox"/> 8. Fencing and Sign Posting |
| <input type="checkbox"/> 9. Groundwater Treatment Systems | <input type="checkbox"/> 10. Soil Vapor Extraction |
| <input type="checkbox"/> 11. Bioremediation | <input type="checkbox"/> 12. Air Sparging |



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC105

IMMEDIATE RESPONSE ACTION (IRA) TRANSMITTAL
FORM

Pursuant to 310 CMR 40.0424 - 40.0427 (Subpart D)

Release Tracking Number

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-

26114

D. DESCRIPTION OF RESPONSE ACTIONS (cont.): (check all that apply, for volumes list cumulative amounts)

☐ 13. Excavation of Contaminated Soils

☐ a. Re-use, Recycling or Treatment

☐ i. On Site Estimated volume in cubic yards _____

☐ ii. Off Site Estimated volume in cubic yards _____

ii.a. Receiving Facility: _____ Town: _____ State: _____

ii.b. Receiving Facility: _____ Town: _____ State: _____

iii. Describe: _____

☐ b. Store

☐ i. On Site Estimated volume in cubic yards _____

☐ ii. Off Site Estimated volume in cubic yards _____

ii.a. Receiving Facility: _____ Town: _____ State: _____

ii.b. Receiving Facility: _____ Town: _____ State: _____

☐ c. Landfill

☐ i. Cover Estimated volume in cubic yards _____

Receiving Facility: _____ Town: _____ State: _____

☐ ii. Disposal Estimated volume in cubic yards _____

Receiving Facility: _____ Town: _____ State: _____

☐ 14. Removal of Drums, Tanks or Containers:

a. Describe Quantity and Amount: _____

b. Receiving Facility: _____ Town: _____ State: _____

c. Receiving Facility: _____ Town: _____ State: _____

☐ 15. Removal of Other Contaminated Media:

a. Specify Type and Volume: _____

b. Receiving Facility: _____ Town: _____ State: _____

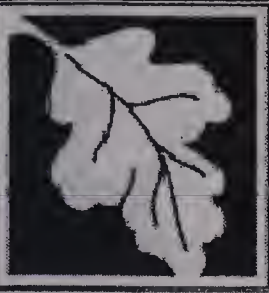
c. Receiving Facility: _____ Town: _____ State: _____

☒ 16. Other Response Actions:

Describe: Temporary air purifiers and/or sub-slab depressurization systems

☐ 17. Use of Innovative Technologies:

Describe: _____



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC105

IMMEDIATE RESPONSE ACTION (IRA) TRANSMITTAL
FORM Pursuant to 310 CMR 40.0424 - 40.0427 (Subpart D)

Release Tracking Number

3

-

26114

E. LSP SIGNATURE AND STAMP:

I attest under the pains and penalties of perjury that I have personally examined and am familiar with this transmittal form, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and 309 CMR 4.03(2), and (iii) the provisions of 309 CMR 4.03(3), to the best of my knowledge, information and belief,

> if Section B of this form indicates that an **Immediate Response Action Plan** is being submitted, the response action(s) that is(are) the subject of this submittal (i) has (have) been developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is(are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (iii) complies(y) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> if Section B of this form indicates that an **Imminent Hazard Evaluation** is being submitted, this Imminent Hazard Evaluation was developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and the assessment activity(ies) undertaken to support this Imminent Hazard Evaluation comply(ies) with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000;

> if Section B of this form indicates that an **Immediate Response Action Status Report** and/or a **Remedial Monitoring Report** is(are) being submitted, the response action(s) that is (are) the subject of this submittal (i) is (are) being implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> if Section B of this form indicates that an **Immediate Response Action Completion Statement** or a request to **Terminate an Active Remedial System or Response Action(s) Taken to Address an Imminent Hazard** is being submitted, the response action(s) that is(are) the subject of this submittal (i) has (have) been developed and implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is(are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal.

I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete.

1. LSP #: 9719

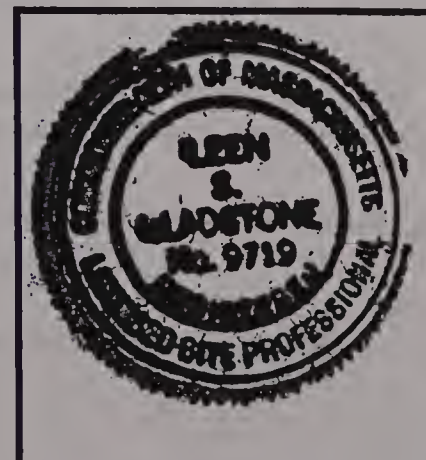
2. First Name: Ileen S. 3. Last Name: Gladstone

4. Telephone: (781) 721-4012 5. Ext.: 6. FAX: (781) 721-4073

7. Signature: 

8. Date: 8/30/07
(mm/dd/yyyy)

9. LSP Stamp:





Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC105

IMMEDIATE RESPONSE ACTION (IRA) TRANSMITTAL
FORM Pursuant to 310 CMR 40.0424 - 40.0427 (Subpart D)

Release Tracking Number

3 - 26114

F. PERSON UNDERTAKING IRA:

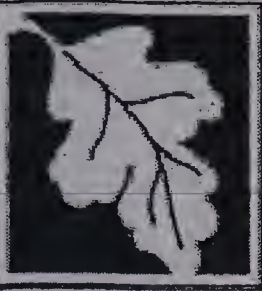
1. Check all that apply: ☐ a. change in contact name ☐ b. change of address ☐ c. change in the person undertaking response actions
2. Name of Organization: UniFirst Corp.
3. Contact First Name: Stephen 4. Last Name: Aquilino
5. Street: 68 Jonspin Road 6. Title: Property Management
7. City/Town: Wilmington 8. State: MA 9. ZIP Code: 01887
10. Telephone: (800) 347-7880 11. Ext.: 12. FAX:

G. RELATIONSHIP TO RELEASE OR THREAT OF RELEASE OF PERSON UNDERTAKING IRA:

- ☒ 1. RP or PRP ☐ a. Owner ☐ b. Operator ☐ c. Generator ☐ d. Transporter
☒ e. Other RP or PRP Specify: Other PRPs
- ☐ 2. Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2)
- ☐ 3. Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5(j))
- ☐ 4. Any Other Person Undertaking IRA Specify Relationship:

H. REQUIRED ATTACHMENT AND SUBMITTALS:

- ☐ 1. Check here if any Remediation Waste, generated as a result of this IRA, will be stored, treated, managed, recycled or reused at the site following submission of the IRA Completion Statement. If this box is checked, you must submit one of the following plans, along with the appropriate transmittal form.
☐ a. A Release Abatement Measure (RAM) Plan (BWSC106) ☐ b. Phase IV Remedy Implementation Plan (BWSC108)
- ☐ 2. Check here if the Response Action(s) on which this opinion is based, if any, are (were) subject to any order(s), permit(s) and/or approval(s) issued by DEP or EPA. If the box is checked, you MUST attach a statement identifying the applicable provisions thereof.
- ☒ 3. Check here to certify that the Chief Municipal Officer and the Local Board of Health were notified of the implementation of an Immediate Response Action taken to control, prevent, abate or eliminate an Imminent Hazard.
- ☐ 4. Check here to certify that the Chief Municipal Officer and the Local Board of Health were notified of the submittal of a Completion Statement for an Immediate Response Action taken to control, prevent, abate or eliminate an Imminent Hazard.
- ☐ 5. Check here if any non-updatable information provided on this form is incorrect, e.g. Release Address/Location Aid. Send corrections to the DEP Regional Office.
- ☒ 6. Check here to certify that the LSP Opinion containing the material facts, data, and other information is attached.



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC105

IMMEDIATE RESPONSE ACTION (IRA) TRANSMITTAL
FORM Pursuant to 310 CMR 40.0424 - 40.0427 (Subpart D)

Release Tracking Number

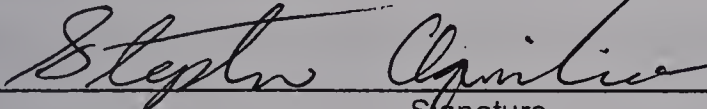
3

-

26114

I. CERTIFICATION OF PERSON UNDERTAKING IRA:

1. I, Stephen Aquilino, attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form, (ii) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (iii) that I am fully authorized to make this attestation on behalf of the entity legally responsible for this submittal. I/the person or entity on whose behalf this submittal is made am/is aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

2. By:  3. Title: Property Management
Signature

4. For: Stephen Aquilino 5. Date: 8-31-07
(Name of person or entity recorded in Section F) (mm/dd/yyyy)

☐ 6. Check here if the address of the person providing certification is different from address recorded in Section F.

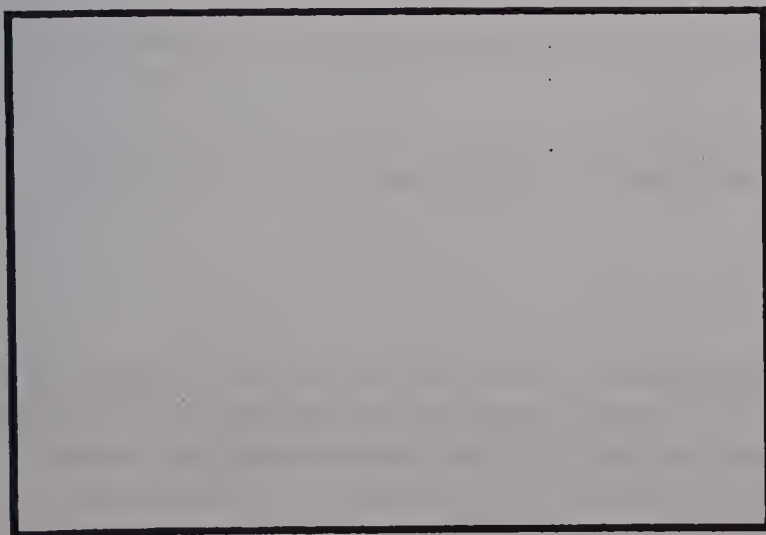
7. Street: _____

8. City/Town: _____ 9. State: _____ 10. ZIP Code: _____

11. Telephone: _____ 12. Ext.: _____ 13. FAX: _____

YOU ARE SUBJECT TO AN ANNUAL COMPLIANCE ASSURANCE FEE OF UP TO \$10,000 PER BILLABLE YEAR FOR THIS DISPOSAL SITE. YOU MUST LEGIBLY COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE.

Date Stamp (DEP USE ONLY:)





Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

Interim Remedial Monitoring Report (RMR) Checklist
Pursuant to 310 CMR 40.0027

Release Tracking Number

3 - 26114

Site Location:

Site Name: _____

Street Address: **50 Tufts Street**

City/Town: **Somerville**

ZIP Code: **02145**

Pursuant to 310 CMR 40.0027, the following information is required as part of a Remedial Monitoring Report:

- ☒ Number and Description of Active Remedial System(s) or Active Remedial Monitoring Program(s) – include type of system, remedial additives applied, mode of operation, and where the system effluent discharges
- ☒ Monitoring Frequency – include date(s) and number of monitoring events for reporting period
- ☒ Operating Status of Active Remedial Systems – include information regarding any system shutdown during the reporting period and the date/duration of shutdown
- ☒ Effluent Concentrations – provide data for all monitoring events, include information regarding any discharges above permissible discharge concentrations
- ☒ Recovery Rates and/or Volumes
- ☒ Discharge Volumes
- ☒ Date, Location, Type, and Volume of Remedial Additive Applications
- ☒ Groundwater Data – sampling results, monitoring data, etc.
- ☒ Related Maps, Graphs or Diagrams
- ☒ Other Supporting Documentation – narrative, laboratory data, etc.

Summary Statements: (check all that apply for the current reporting period)

The response actions are being conducted as part of a(n):

☒ IRA ☐ RAM ☐ URAM ☐ Phase V ☐ ROS ☐ Class C RAO

Submittal Frequency:

☒ Monthly (IH/SRM) ☐ Concurrent with Status Reports

☒ All Active Remedial System checks and effluent analyses required by the approved plan and/or permit were performed when applicable.

☒ There were no significant problems or prolonged (>25% of reporting period) unscheduled shutdowns of the Active Remedial System.

☒ The Active Remedial System or Active Remedial Monitoring Program operated in conformance with the MCP, and all applicable approval conditions and/or permits.

Note to users: This Interim Remedial Monitoring Report (RMR) Checklist is for hardcopy submittals only. This form may be used through April 3, 2007. On or after this date, all Remedial Monitoring Reports must be submitted to the Department electronically pursuant to 310 CMR 40.0027(6). The Remedial Monitoring Report is currently available through eDEP as part of the electronic online submittal of the BWSC105 Immediate Response Action (IRA) Transmittal Form, BWSC106 Release Abatement Measure (RAM) Transmittal Form, BWSC108 Comprehensive Response Action Transmittal Form, and BWSC119 Utility-Related Abatement Measure (URAM) Transmittal Form.



Geotechnical
Environmental and
Water Resources
Engineering



ATTACHMENT B

Weekly Mechanical Inspection Log for Capuano Center

Weekly Mechanical Inspection Log for Capuano Center

| | | | |
|-------------------------------------|--|--------------------------------------|--|
| GENERAL INFORMATION | | | |
| GEI Field Representatives: L. Welch | | Start-time of monitoring work: 18:10 | |
| Date: 03/01/07 | | End-time of monitoring work: 19:05 | |
| Weather: Fair, ~30°F | | System Status: ON | |

| | | |
|-----------------------------|---------------------|---------------------------------|
| INSTRUMENTATION INFORMATION | | |
| Instrument | OVm (ppm) | Manometer (in H ₂ O) |
| Manufacturer | ThermoEnvironmental | Dwyer |
| Model | 580B | Mark III-475-0000 Series |
| GEI Identification No. | GEI | NA |
| Calibrant | 100 ppm isobutylene | NA |
| Successful Calibration | Yes | Zeroed before each reading |

| FIELD MEASUREMENTS | | | | | | | | | | | | | | | | | | | | |
|--------------------------------|---------------------------------|---|-----------------------|-----------|------------------|---------------------------------|-------|------|------|------|------|------|------|------|--|------|---|--|-----|-------------------------|
| Shed Secure? | YES | Discharge Pressure Port | | | | | | | | | | | | | | | | | | |
| Condensate Accumulated? | YES | <table><tr><th>Insert Increment</th><th>Pressure (in. H₂O)</th></tr><tr><td>0.25"</td><td>0.10</td></tr><tr><td>0.5"</td><td>0.10</td></tr><tr><td>1.0"</td><td>0.11</td></tr><tr><td>2.0"</td><td>0.09</td></tr><tr><td></td><td>0.10</td><td>Average Pressure (in. H₂O)</td></tr><tr><td></td><td>108</td><td>Average Flow Rate (cfm)</td></tr></table> | | | Insert Increment | Pressure (in. H ₂ O) | 0.25" | 0.10 | 0.5" | 0.10 | 1.0" | 0.11 | 2.0" | 0.09 | | 0.10 | Average Pressure (in. H ₂ O) | | 108 | Average Flow Rate (cfm) |
| Insert Increment | Pressure (in. H ₂ O) | | | | | | | | | | | | | | | | | | | |
| 0.25" | 0.10 | | | | | | | | | | | | | | | | | | | |
| 0.5" | 0.10 | | | | | | | | | | | | | | | | | | | |
| 1.0" | 0.11 | | | | | | | | | | | | | | | | | | | |
| 2.0" | 0.09 | | | | | | | | | | | | | | | | | | | |
| | 0.10 | Average Pressure (in. H ₂ O) | | | | | | | | | | | | | | | | | | |
| | 108 | Average Flow Rate (cfm) | | | | | | | | | | | | | | | | | | |
| Condensate Drained? | YES | | | | | | | | | | | | | | | | | | | |
| Shed Pressure/VOC Measurements | | | | | | | | | | | | | | | | | | | | |
| Port ID | Typical Pressure Range | Pressure | Typcial Range of VOCs | VOC (ppb) | | | | | | | | | | | | | | | | |
| Manifold 12 | -0.300 to -0.500 | -0.35 | 0 to 2000 | 0.8 ppm | | | | | | | | | | | | | | | | |
| Manifordl 13 | -0.300 to -0.500 | -0.39 | 0 to 5000 | 1.0 ppm | | | | | | | | | | | | | | | | |
| Manifold 14 | -0.300 to -0.500 | -0.34 | 0 to 2000 | 1.0 ppm | | | | | | | | | | | | | | | | |
| Combined Influent | -0.600 to -0.700 | -0.65 | 0 to 2000 | 0.8 ppm | | | | | | | | | | | | | | | | |
| Effluent | 0.480 to 0.600 | 0.48 | 0 to 2000 | 1.0 ppm | | | | | | | | | | | | | | | | |

| |
|---|
| Comments |
| System operating well. |
| Installed cellular modem and autodialer (with Kevin Dady and Darren Clark of GEI) |

Notes:
1. Manifold 12 is the manifold pipe for rooms 122 and 126. Manifold 13 is the manifold pipe for rooms 134 and 138. Manifold 14 is the manifold pipe for rooms 142 and 146.

Weekly Mechanical Inspection Log for Capuano Center

GENERAL INFORMATION

| | |
|----------------------------|----------------------------|
| GEI Field Representatives: | H. Ballantyne S. Slater |
| Date: | 03/08/07 |
| Weather: | windy, cloudy, ~15°F |

```
Start-time of monitoring work: 21:00
End-time of monitoring work: 21:45
System Status: ON
```

INSTRUMENTATION INFORMATION

| | | |
|------------------------|--------------------|---------------------------------|
| Instrument | PID (ppb) | Manometer (in H ₂ O) |
| Manufacturer | Pro-Rae Systems | Dwyer |
| Model | ppb-RAE | Mark III-475-0000 Series |
| GEI Identification No. | PINE | NA |
| Calibrant | 10 ppm Isobutylene | NA |
| Successful Calibration | Yes | Zeroed before each reading |

FIELD MEASUREMENTS

Shed Secure? YES

Discharge Pressure Port

Condensate Accumulated? NO

| Insert Increment | Pressure (in. H2O) |
|------------------|--------------------|
| 0.25" | 0.069 |
| 0.5" | 0.099 |
| 1.0" | 0.106 |
| 2.0" | 0.109 |

| | |
|---------------------|----|
| Condensate Drained? | NO |
|---------------------|----|

| | |
|------|---|
| 0.96 | Average Pressure (in. H ₂ O) |
| 106 | Average Flow Rate (cfm) |

Shed Pressure/VOC Measurements

| Port ID | Typical Pressure Range | Pressure | Typcial Range of VOCs | VOC (ppb) |
|-------------------|------------------------|----------|-----------------------|-----------|
| Manifold 12 | -0.300 to -0.500 | -0.361 | 0 to 2000 | 958 |
| Manifold 13 | -0.300 to -0.500 | -0.372 | 0 to 5000 | 425 |
| Manifold 14 | -0.300 to -0.500 | -0.356 | 0 to 2000 | 602 |
| Combined Influent | -0.600 to -0.700 | -0.610 | 0 to 2000 | 534 |
| Effluent | 0.480 to 0.600 | -0.625 | 0 to 2000 | 428 |

Comments

Notes:

1. Manifold 12 is the manifold pipe for rooms 122 and 126. Manifold 13 is the manifold pipe for rooms 134 and 138. Manifold 14 is the manifold pipe for rooms 142 and 146.

Weekly Mechanical Inspection Log for Capuano Center

| | | |
|----------------------------|-----------------------|--------------------------------------|
| GENERAL INFORMATION | | |
| GEI Field Representatives: | K. Wolfe T. Daigle | Start-time of monitoring work: 12:15 |
| Date: | 03/14/07 | End-time of monitoring work: 13:00 |
| Weather: | cloudy, ~60°F | System Status: ON |

| | | |
|-----------------------------|--------------------|---------------------------------|
| INSTRUMENTATION INFORMATION | | |
| Instrument | PID (ppb) | Manometer (in H ₂ O) |
| Manufacturer | Pro-Rae Systems | Dwyer |
| Model | ppb-RAE | Mark III-475-0000 Series |
| GEI Identification No. | PINE | NA |
| Calibrant | 10 ppm Isobutylene | NA |
| Successful Calibration | Yes | Zeroed before each reading |

| | | | | |
|--------------------------------|------------------------|-------------------------|---------------------------------|---|
| FIELD MEASUREMENTS | | | | |
| Shed Secure? | <u>YES</u> | Discharge Pressure Port | | |
| Condensate Accumulated? | <u>NO</u> | | | |
| Condensate Drained? | <u>NA</u> | | | |
| | | Insert Increment | Pressure (in. H ₂ O) | |
| | | 0.25" | 0.069 | |
| | | 0.5" | 0.099 | |
| | | 1.0" | 0.106 | |
| | | 2.0" | 0.109 | |
| | | | 0.96 | Average Pressure (in. H ₂ O) |
| | | | 106 | Average Flow Rate (cfm) |
| Shed Pressure/VOC Measurements | | | | |
| Port ID | Typical Pressure Range | Pressure | Typcial Range of VOCs | VOC (ppb) |
| Manifold 12 | -0.300 to -0.500 | -0.34 | 0 to 2000 | 22 |
| Maniforld 13 | -0.300 to -0.500 | -0.352 | 0 to 5000 | 273 |
| Manifold 14 | -0.300 to -0.500 | -0.315 | 0 to 2000 | 111 |
| Combined Influent | -0.600 to -0.700 | -0.605 | 0 to 2000 | 163 |
| Effluent | 0.480 to 0.600 | -0.419 | 0 to 2000 | 86 |

| |
|----------------------|
| Comments |
| Checked batteries in |

Notes:
1. Manifold 12 is the manifold pipe for rooms 122 and 126. Manifold 13 is the manifold pipe for rooms 134 and 138. Manifold 14 is the manifold pipe for rooms 142 and 146.

Weekly Mechanical Inspection Log for Capuano Center

| | | | |
|----------------------------|------------------------|--------------------------------|-------|
| GENERAL INFORMATION | | | |
| GEI Field Representatives: | S. Slater T. Daigle | Start-time of monitoring work: | 13:56 |
| Date: | 03/22/07 | End-time of monitoring work: | 14:45 |
| Weather: | sunny, ~60°F | System Status: | ON |

| | | |
|-----------------------------|--------------------|---------------------------------|
| INSTRUMENTATION INFORMATION | | |
| Instrument | PID (ppb) | Manometer (in H ₂ O) |
| Manufacturer | Pro-Rae Systems | Dwyer |
| Model | ppb-RAE | Mark III-475-0000 Series |
| GEI Identification No. | PINE | NA |
| Calibrant | 10 ppm Isobutylene | NA |
| Successful Calibration | Yes | Zeroed before each reading |

| FIELD MEASUREMENTS | | | | | | | | | | | | | | | | | | | | |
|--------------------------------|---------------------------------|--|-----------------------|-----------|------------------|---------------------------------|-------|----|------|----|------|----|------|----|--|----|---|--|----|-------------------------|
| Shed Secure? | <u>YES</u> | Discharge Pressure Port | | | | | | | | | | | | | | | | | | |
| Condensate Accumulated? | <u>NO</u> | <table><tr><th>Insert Increment</th><th>Pressure (in. H₂O)</th></tr><tr><td>0.25"</td><td>NM</td></tr><tr><td>0.5"</td><td>NM</td></tr><tr><td>1.0"</td><td>NM</td></tr><tr><td>2.0"</td><td>NM</td></tr><tr><td></td><td>NM</td><td>Average Pressure (in. H₂O)</td></tr><tr><td></td><td>NA</td><td>Average Flow Rate (cfm)</td></tr></table> | | | Insert Increment | Pressure (in. H ₂ O) | 0.25" | NM | 0.5" | NM | 1.0" | NM | 2.0" | NM | | NM | Average Pressure (in. H ₂ O) | | NA | Average Flow Rate (cfm) |
| Insert Increment | Pressure (in. H ₂ O) | | | | | | | | | | | | | | | | | | | |
| 0.25" | NM | | | | | | | | | | | | | | | | | | | |
| 0.5" | NM | | | | | | | | | | | | | | | | | | | |
| 1.0" | NM | | | | | | | | | | | | | | | | | | | |
| 2.0" | NM | | | | | | | | | | | | | | | | | | | |
| | NM | Average Pressure (in. H ₂ O) | | | | | | | | | | | | | | | | | | |
| | NA | Average Flow Rate (cfm) | | | | | | | | | | | | | | | | | | |
| Condensate Drained? | <u>NA</u> | | | | | | | | | | | | | | | | | | | |
| Shed Pressure/VOC Measurements | | | | | | | | | | | | | | | | | | | | |
| Port ID | Typical Pressure Range | Pressure | Typcial Range of VOCs | VOC (ppb) | | | | | | | | | | | | | | | | |
| Manifold 12 | -0.300 to -0.500 | -0.325 | 0 to 2000 | 144 | | | | | | | | | | | | | | | | |
| Manifold 13 | -0.300 to -0.500 | -0.35 | 0 to 5000 | 0 | | | | | | | | | | | | | | | | |
| Manifold 14 | -0.300 to -0.500 | -0.345 | 0 to 2000 | 0 | | | | | | | | | | | | | | | | |
| Combined Influent | -0.600 to -0.700 | -0.615 | 0 to 2000 | 0 | | | | | | | | | | | | | | | | |
| Effluent | 0.480 to 0.600 | 0.59 | 0 to 2000 | 1058 | | | | | | | | | | | | | | | | |

| |
|----------------------|
| Comments |
| Low VOC readings may |

Notes:
1. Manifold 12 is the manifold pipe for rooms 122 and 126. Manifold 13 is the manifold pipe for rooms 134 and 138. Manifold 14 is the manifold pipe for rooms 142 and 146.

Weekly Mechanical Inspection Log for Capuano Center

| | | |
|----------------------------|------------------------|--------------------------------------|
| GENERAL INFORMATION | | |
| GEI Field Representatives: | S. Slater T. Daigle | Start-time of monitoring work: 14:53 |
| Date: | 03/29/07 | End-time of monitoring work: 13:35 |
| Weather: | sunny, ~60°F | System Status: ON |

| | | |
|-----------------------------|--------------------|---------------------------------|
| INSTRUMENTATION INFORMATION | | |
| Instrument | PID (ppb) | Manometer (in H ₂ O) |
| Manufacturer | Pro-Rae Systems | Dwyer |
| Model | ppb-RAE | Mark III-475-0000 Series |
| GEI Identification No. | PINE | NA |
| Calibrant | 10 ppm Isobutylene | NA |
| Successful Calibration | Yes | Zeroed before each reading |

| | | | | |
|--------------------------------|------------------------|-------------------------|---------------------------------|---|
| FIELD MEASUREMENTS | | | | |
| Shed Secure? | <u>YES</u> | Discharge Pressure Port | | |
| Condensate Accumulated? | <u>NO</u> | | | |
| Condensate Drained? | <u>NA</u> | | | |
| | | Insert Increment | Pressure (in. H ₂ O) | |
| | | 0.25" | 0.08 | |
| | | 0.5" | 0.08 | |
| | | 1.0" | 0.07 | |
| | | 2.0" | 0.07 | |
| | | | 0.075 | Average Pressure (in. H ₂ O) |
| | | | 93 | Average Flow Rate (cfm) |
| Shed Pressure/VOC Measurements | | | | |
| Port ID | Typical Pressure Range | Pressure | Typcial Range of VOCs | VOC (ppb) |
| Manifold 12 | -0.300 to -0.500 | -0.35 | 0 to 2000 | 85 |
| ManiforId 13 | -0.300 to -0.500 | -0.39 | 0 to 5000 | 0 |
| Manifold 14 | -0.300 to -0.500 | -0.4 | 0 to 2000 | 0 |
| Combined Influent | -0.600 to -0.700 | -0.630 | 0 to 2000 | 0 |
| Effluent | 0.480 to 0.600 | 0.55 | 0 to 2000 | 600 |

| |
|---------------------------------|
| Comments |
| Had difficulty calibrating ppb- |

Notes:
1. Manifold 12 is the manifold pipe for rooms 122 and 126. Manifold 13 is the manifold pipe for rooms 134 and 138. Manifold 14 is the manifold pipe for rooms 142 and 146.

Weekly Mechanical Inspection Log for Capuano Center

GENERAL INFORMATION

GEI Field Representatives: T. Daigle, S. Slater
H. Ballantyne
Date: 04/06/07
Weather: sunny, breezy, ~35-40°F

Start-time of monitoring work: 12:00:00
End-time of monitoring work: 13:00:00
System Status: ON

INSTRUMENTATION INFORMATION

| | | |
|-------------------------------|--------------------|---------------------------------|
| Instrument | PID (ppb) | Manometer (in H ₂ O) |
| Manufacturer | Pro-Rae Systems | Dwyer |
| Model | ppb-RAE | Mark III-475-0000 Series |
| GEI Identification No. | PINE | NA |
| Calibrant | 10 ppm Isobutylene | NA |
| Successful Calibration | Yes | Zeroed before each reading |

FIELD MEASUREMENTS

Shed Secure? YES

Discharge Pressure Port

Condensate Accumulated? NO

| Insert Increment | Pressure (in. H2O) |
|------------------|--------------------|
| 0.25" | 0.074 |
| 0.5" | 0.101 |
| 1.0" | 0.091 |
| 2.0" | 0.087 |

| | |
|---------------------|----|
| Condensate Drained? | NA |
|---------------------|----|

| | |
|---------|---|
| 0.08825 | Average Pressure (in. H ₂ O) |
|---------|---|

| 101 | Average Flow Rate (cfm) |
|-----|-------------------------|
|-----|-------------------------|

Shed Pressure/VOC Measurements

| Port ID | Typical Pressure Range | Pressure | Typcial Range of VOCs | VOC (ppb) |
|-------------------|------------------------|----------|-----------------------|-----------|
| Manifold 12 | -0.300 to -0.500 | -0.208 | 0 to 2000 | 21 |
| Manifold 13 | -0.300 to -0.500 | -0.251 | 0 to 5000 | 115 |
| Manifold 14 | -0.300 to -0.500 | -0.246 | 0 to 2000 | 70 |
| Combined Influent | -0.600 to -0.700 | -0.401 | 0 to 2000 | 43 |
| Effluent | 0.480 to 0.600 | 0.67 | 0 to 2000 | 41 |

Comments

Notes:

1. Manifold 12 is the manifold pipe for rooms 122 and 126. Manifold 13 is the manifold pipe for rooms 134 and 138. Manifold 14 is the manifold pipe for rooms 142 and 146.

Weekly Mechanical Inspection Log for Capuano Center

| | | |
|----------------------------|--------------------------|--------------------------------------|
| GENERAL INFORMATION | | |
| GEI Field Representatives: | S.Slater H.Ballantyne | Start-time of monitoring work: 11:25 |
| Date: | 04/20/07 | End-time of monitoring work: 12:25 |
| Weather: | ~50°F, sunny | System Status: ON |

| | | |
|-----------------------------|--------------------|---------------------------------|
| INSTRUMENTATION INFORMATION | | |
| Instrument | PID (ppb) | Manometer (in H ₂ O) |
| Manufacturer | Pro-Rae Systems | Dwyer |
| Model | ppb-RAE | Mark III-475-0000 Series |
| GEI Identification No. | PINE | NA |
| Calibrant | 10 ppm Isobutylene | NA |
| Successful Calibration | Yes | Zeroed before each reading |

| FIELD MEASUREMENTS | | | | | | | | | | | | | | | | | | | | |
|--------------------------------|---------------------------------|--|-----------------------|-----------|------------------|---------------------------------|-------|-------|------|-------|------|-------|------|-------|--|---------|---|--|-----|-------------------------|
| Shed Secure? | <u>YES</u> | Discharge Pressure Port | | | | | | | | | | | | | | | | | | |
| Condensate Accumulated? | <u>NO</u> | <table><tr><th>Insert Increment</th><th>Pressure (in. H₂O)</th></tr><tr><td>0.25"</td><td>0.038</td></tr><tr><td>0.5"</td><td>0.112</td></tr><tr><td>1.0"</td><td>0.198</td></tr><tr><td>2.0"</td><td>0.077</td></tr><tr><td></td><td>0.10625</td><td>Average Pressure (in. H₂O)</td></tr><tr><td></td><td>109</td><td>Average Flow Rate (cfm)</td></tr></table> | | | Insert Increment | Pressure (in. H ₂ O) | 0.25" | 0.038 | 0.5" | 0.112 | 1.0" | 0.198 | 2.0" | 0.077 | | 0.10625 | Average Pressure (in. H ₂ O) | | 109 | Average Flow Rate (cfm) |
| Insert Increment | Pressure (in. H ₂ O) | | | | | | | | | | | | | | | | | | | |
| 0.25" | 0.038 | | | | | | | | | | | | | | | | | | | |
| 0.5" | 0.112 | | | | | | | | | | | | | | | | | | | |
| 1.0" | 0.198 | | | | | | | | | | | | | | | | | | | |
| 2.0" | 0.077 | | | | | | | | | | | | | | | | | | | |
| | 0.10625 | Average Pressure (in. H ₂ O) | | | | | | | | | | | | | | | | | | |
| | 109 | Average Flow Rate (cfm) | | | | | | | | | | | | | | | | | | |
| Condensate Drained? | <u>NA</u> | | | | | | | | | | | | | | | | | | | |
| Shed Pressure/VOC Measurements | | | | | | | | | | | | | | | | | | | | |
| Port ID | Typical Pressure Range | Pressure | Typcial Range of VOCs | VOC (ppb) | | | | | | | | | | | | | | | | |
| Manifold 12 | -0.300 to -0.500 | -0.36 | 0 to 2000 | 37 | | | | | | | | | | | | | | | | |
| Manifordld 13 | -0.300 to -0.500 | -0.345 | 0 to 5000 | 169 | | | | | | | | | | | | | | | | |
| Manifold 14 | -0.300 to -0.500 | -0.358 | 0 to 2000 | 152 | | | | | | | | | | | | | | | | |
| Combined Influent | -0.600 to -0.700 | -0.629 | 0 to 2000 | 151 | | | | | | | | | | | | | | | | |
| Effluent | 0.480 to 0.600 | -0.642 | 0 to 2000 | 128 | | | | | | | | | | | | | | | | |

| |
|------------------------------|
| Comments |
| Collected monthly indoor air |

Notes:
1. Manifold 12 is the manifold pipe for rooms 122 and 126. Manifold 13 is the manifold pipe for rooms 134 and 138. Manifold 14 is the manifold pipe for rooms 142 and 146.

PRE-SAMPLING CHECKLIST

Date: 4/20/07

Time Period 07:00-12:25

Field Person: H. Ballantyne

Building Operating Parameter Verification

| | |
|---|---|
| 1. Confirm building operating schedule (global) set to 24 hr operation | Yes |
| 2. Confirm outdoor air for all air handling units and unit ventilators set to minimum damper position via EMS | Room 133 and 217 UV are off due to mechanical difficulties Set outside temperature to 70°F |
| 3. Confirm general exhaust fans F2 and F5 remain off | Yes |
| 4. Confirm RTU 1 RAF is set at 50% | Yes |
| 5. Confirm RTU 1&2, AHU 1&2 operating | Yes |

Building Pressure Verification

| Location Description | Time | "H2O |
|---|------|-------------|
| Parking lot next to dumpster-Janitor's entrance | | 0.004-0.008 |
| Parking lot next to dumpster-Stair entrance | | 0.005-0.009 |
| Main Entrance | | 0.003-0.004 |
| Entrance beside gymnasium | | 0.005-0.010 |
| Stairway end of classrooms-Street Side | | 0.019-0.025 |
| | | |

Sample Location Checklist

| | Rm 126 | Rm 138 | Rm 142 | Rm_146 | Rm 141 |
|---------------------------------|-----------------|-----------------|----------------|----------------|----------------|
| Unit ventilator operating | Yes | Yes | Yes | Yes | Yes |
| UV min OA damper position (EMS) | 41% | 41% | 41% | 41% | 41% |
| Unit ventilator fan speed | High | High | High | High | High |
| Windows closed | Yes | Yes | Yes | Yes | Yes |
| Bathroom door closed | Yes | Yes | Yes | Yes | Yes |
| Bathroom exhaust operating | Yes | Yes | Yes | Yes | Yes |
| Room door closed | Yes | Yes | Yes | Yes | Yes |
| Pressure wrt outdoors | -0.003 to-0.007 | -0.008to -0.010 | -0.008to-0.011 | -0.007to-0.010 | -0.007to-0.013 |
| Pressure wrt corridor | -0.005to-0.006 | -0.003to-0.004 | -0.003to-0.005 | -0.003to-0.004 | -0.009to-0.012 |

Weekly Mechanical Inspection Log for Capuano Center

GENERAL INFORMATION

GEI Field Representatives: T. Daigle
S. Slater
Date: 04/28/07
Weather: cloudy, drizzle, ~50°F

Start-time of monitoring work: 15:20
End-time of monitoring work: 16:00
System Status: ON

INSTRUMENTATION INFORMATION

| Instrument | PID (ppb) | Manometer (in H ₂ O) |
|------------------------|--------------------|---------------------------------|
| Manufacturer | Pro-Rae Systems | Dwyer |
| Model | ppb-RAE | Mark III-475-0000 Series |
| GEI Identification No. | PINE | NA |
| Calibrant | 10 ppm Isobutylene | NA |
| Successful Calibration | Yes | Zeroed before each reading |

FIELD MEASUREMENTS

| Shed Secure? | YES | Discharge Pressure Port | | | | | | | | | | | | | | |
|-------------------------|---------------------------------|---|------------------|---------------------------------|-------|------|------|-------|------|-------|------|-------|--|-------|--|-----|
| Condensate Accumulated? | NO | <table border="1"> <thead> <tr> <th>Insert Increment</th> <th>Pressure (in. H₂O)</th> </tr> </thead> <tbody> <tr> <td>0.25"</td> <td>0.11</td> </tr> <tr> <td>0.5"</td> <td>0.104</td> </tr> <tr> <td>1.0"</td> <td>0.104</td> </tr> <tr> <td>2.0"</td> <td>0.106</td> </tr> <tr> <td></td> <td>0.106</td> </tr> <tr> <td></td> <td>109</td> </tr> </tbody> </table> | Insert Increment | Pressure (in. H ₂ O) | 0.25" | 0.11 | 0.5" | 0.104 | 1.0" | 0.104 | 2.0" | 0.106 | | 0.106 | | 109 |
| Insert Increment | Pressure (in. H ₂ O) | | | | | | | | | | | | | | | |
| 0.25" | 0.11 | | | | | | | | | | | | | | | |
| 0.5" | 0.104 | | | | | | | | | | | | | | | |
| 1.0" | 0.104 | | | | | | | | | | | | | | | |
| 2.0" | 0.106 | | | | | | | | | | | | | | | |
| | 0.106 | | | | | | | | | | | | | | | |
| | 109 | | | | | | | | | | | | | | | |
| Condensate Drained? | NA | <p>Average Pressure (in. H₂O)</p> <p>Average Flow Rate (cfm)</p> | | | | | | | | | | | | | | |

Shed Pressure/VOC Measurements

| Port ID | Typical Pressure Range | Pressure | Typcial Range of VOCs | VOC (ppb) |
|-------------------|------------------------|----------|-----------------------|-----------|
| Manifold 12 | -0.300 to -0.500 | -0.27 | 0 to 2000 | NM |
| Manifold 13 | -0.300 to -0.500 | -0.29 | 0 to 5000 | NM |
| Manifold 14 | -0.300 to -0.500 | -0.26 | 0 to 2000 | NM |
| Combined Influent | -0.600 to -0.700 | 0.648 | 0 to 2000 | NM |
| Effluent | 0.480 to 0.600 | 0.597 | 0 to 2000 | NM |

Comments

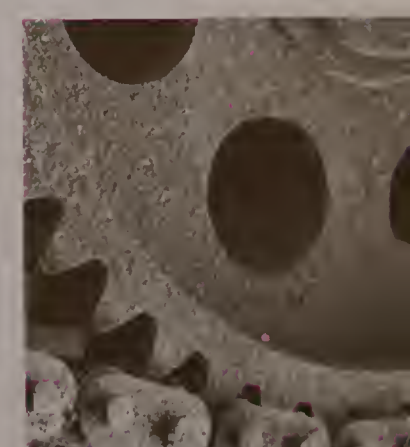
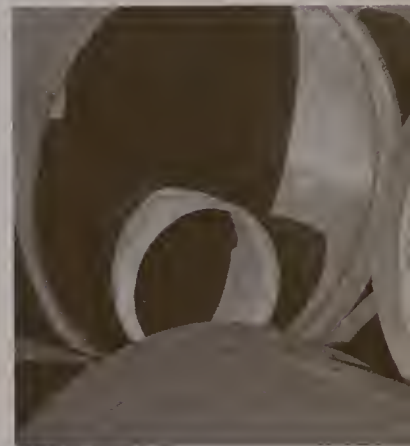
PPB-RAE was

Notes:

1. Manifold 12 is the manifold pipe for rooms 122 and 126. Manifold 13 is the manifold pipe for rooms 134 and 138. Manifold 14 is the manifold pipe for rooms 142 and 146.



Geotechnical
Environmental and
Water Resources
Engineering

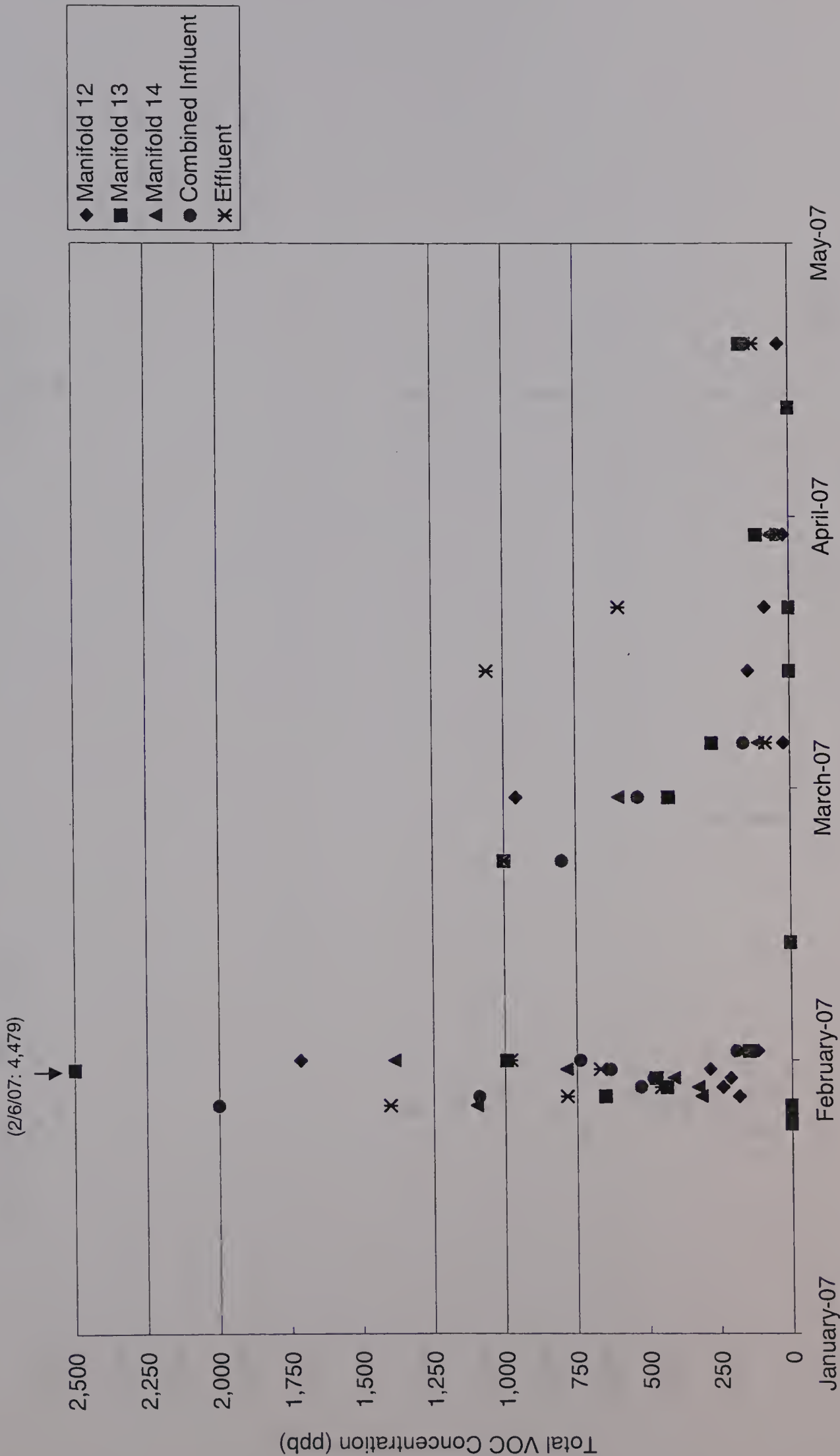


ATTACHMENT C

Graphs of SSDS and Sub-Slab Total VOC Concentrations

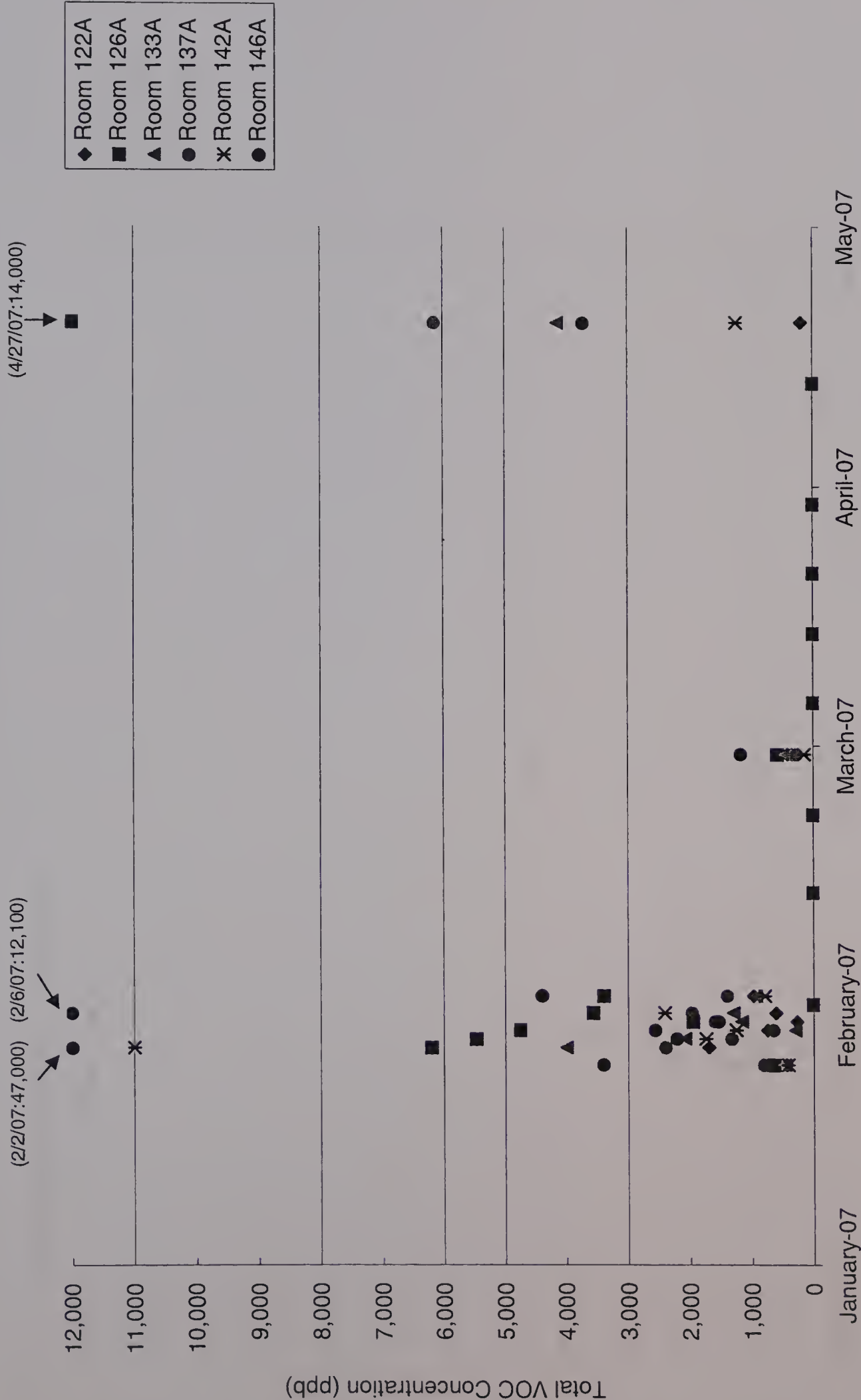
Graph 1

PID Monitoring Data: January 31, 2007 - April 30, 2007
Total VOC Concentrations by PID at Blower Enclosure Monitoring Points
Capuano Center
Somerville, MA



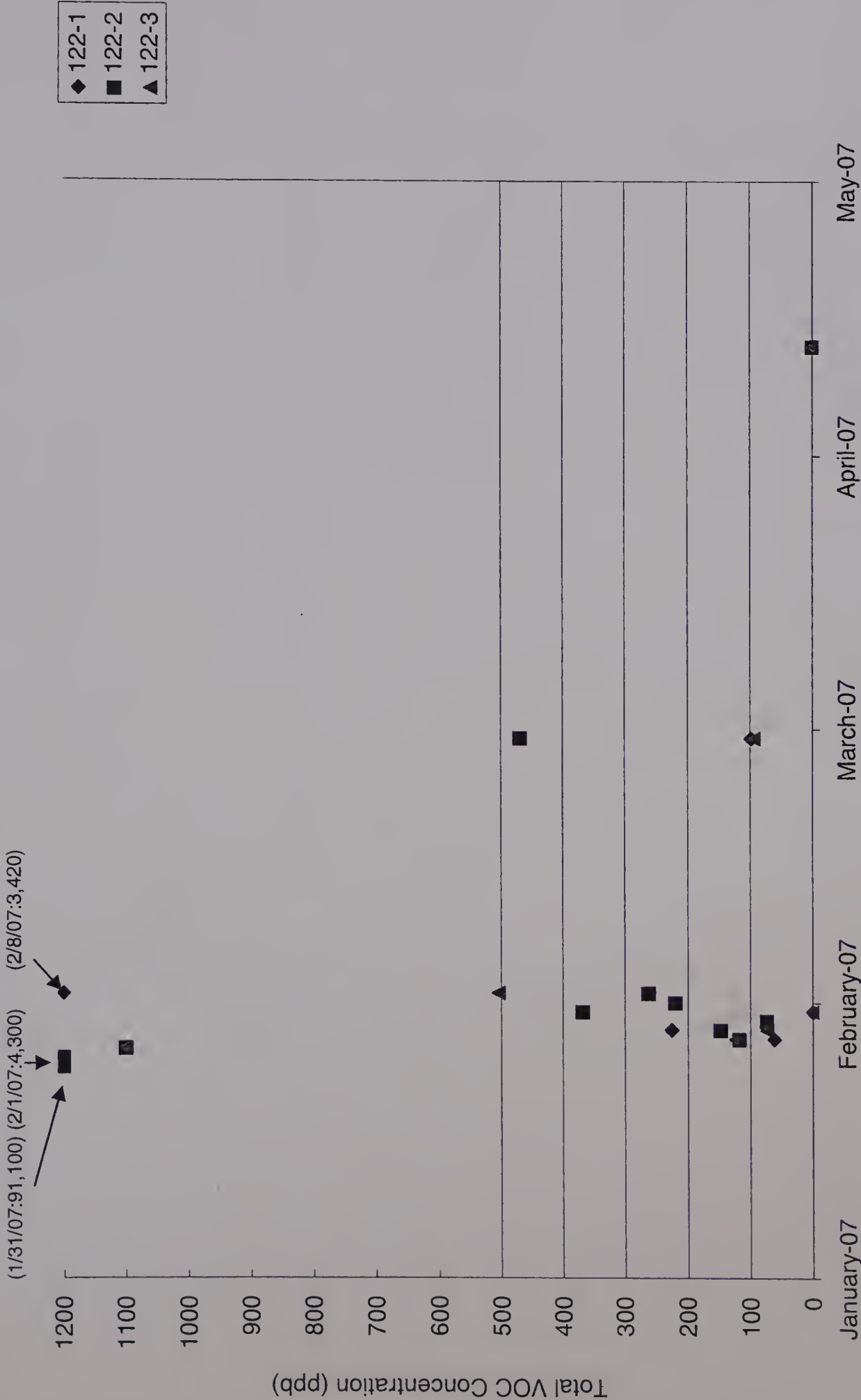
Graph 2

PID Monitoring Data: January 31, 2007 - April 30, 2007
Total VOC Concentrations by PID at Interior Sub-Slab Monitoring Points
Capuano Center
Somerville, MA



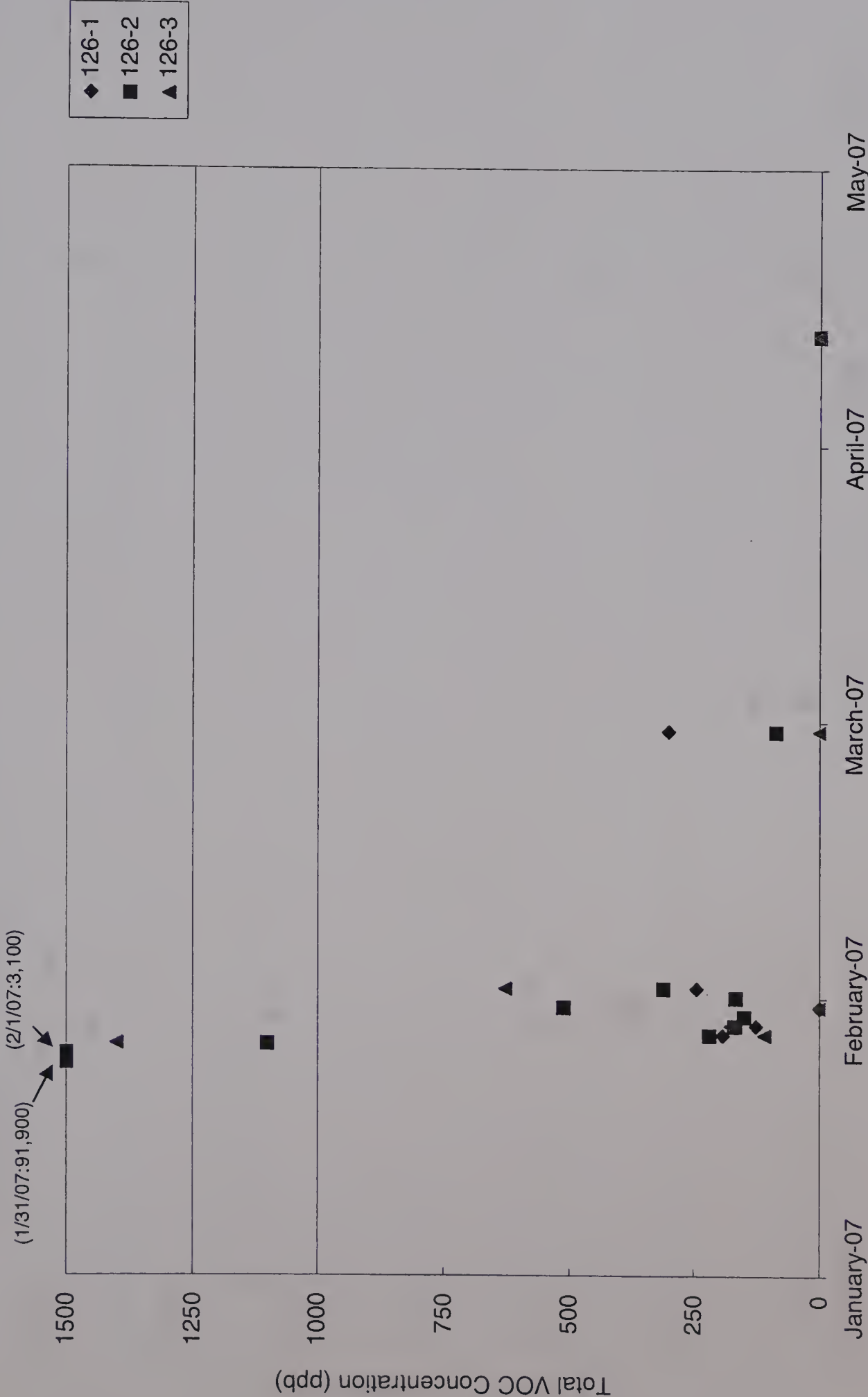
Graph 3

PID Monitoring Data: January 31, 2007 - April 30, 2007
Total VOC Concentrations by PID at Exterior Sub-Slab Monitoring Points - Room 122
Capuano Center
Somerville, MA



Graph 4

PID Monitoring Data: January 31, 2007 - April 30, 2007
Total VOC Concentrations by PID at Exterior Sub-Slab Monitoring Points - Room 126
Capuano Center
Somerville, MA



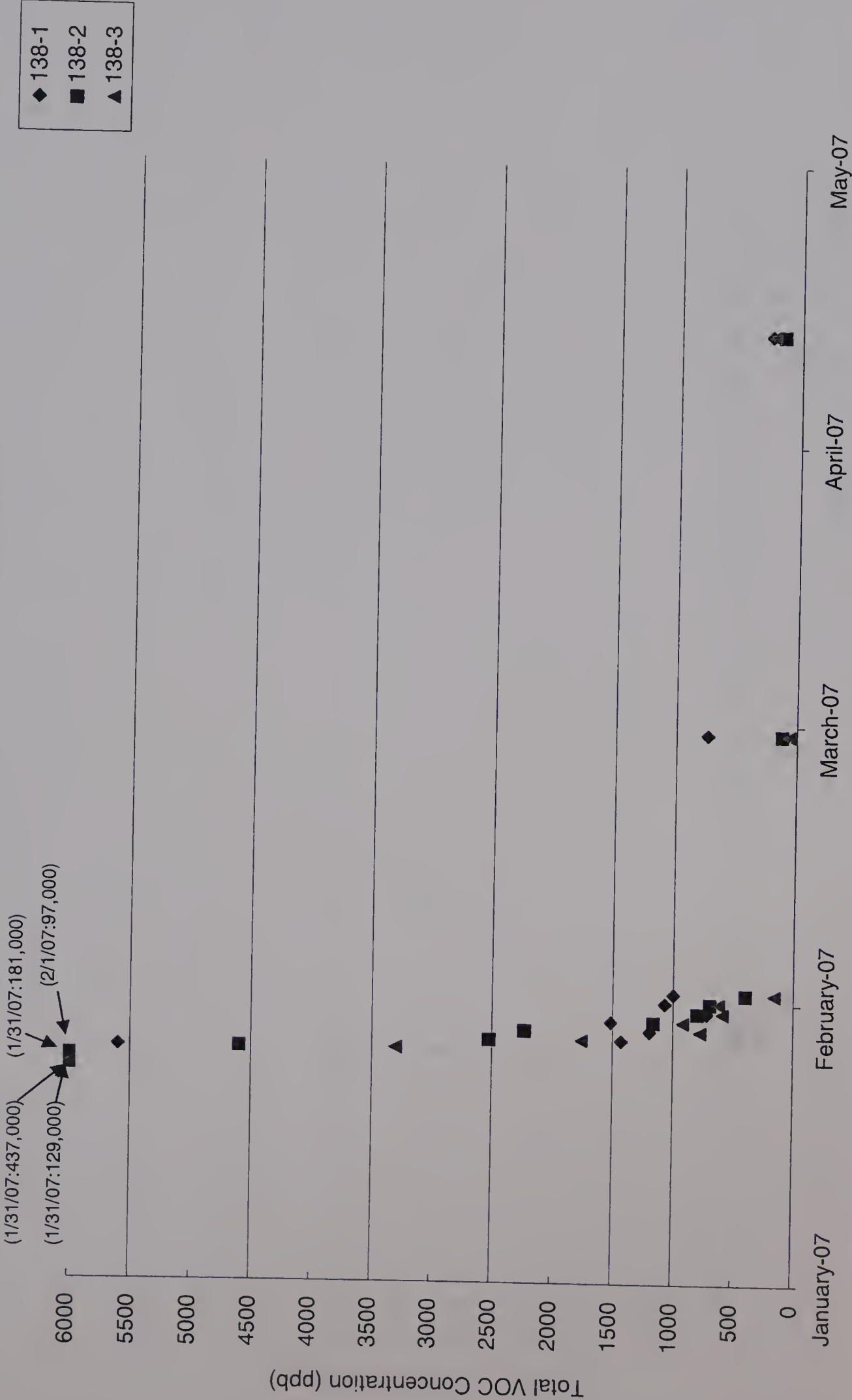
PID Monitoring Data: January 31, 2007 - April 30, 2007

**Capuano Center
Somerville, MA**



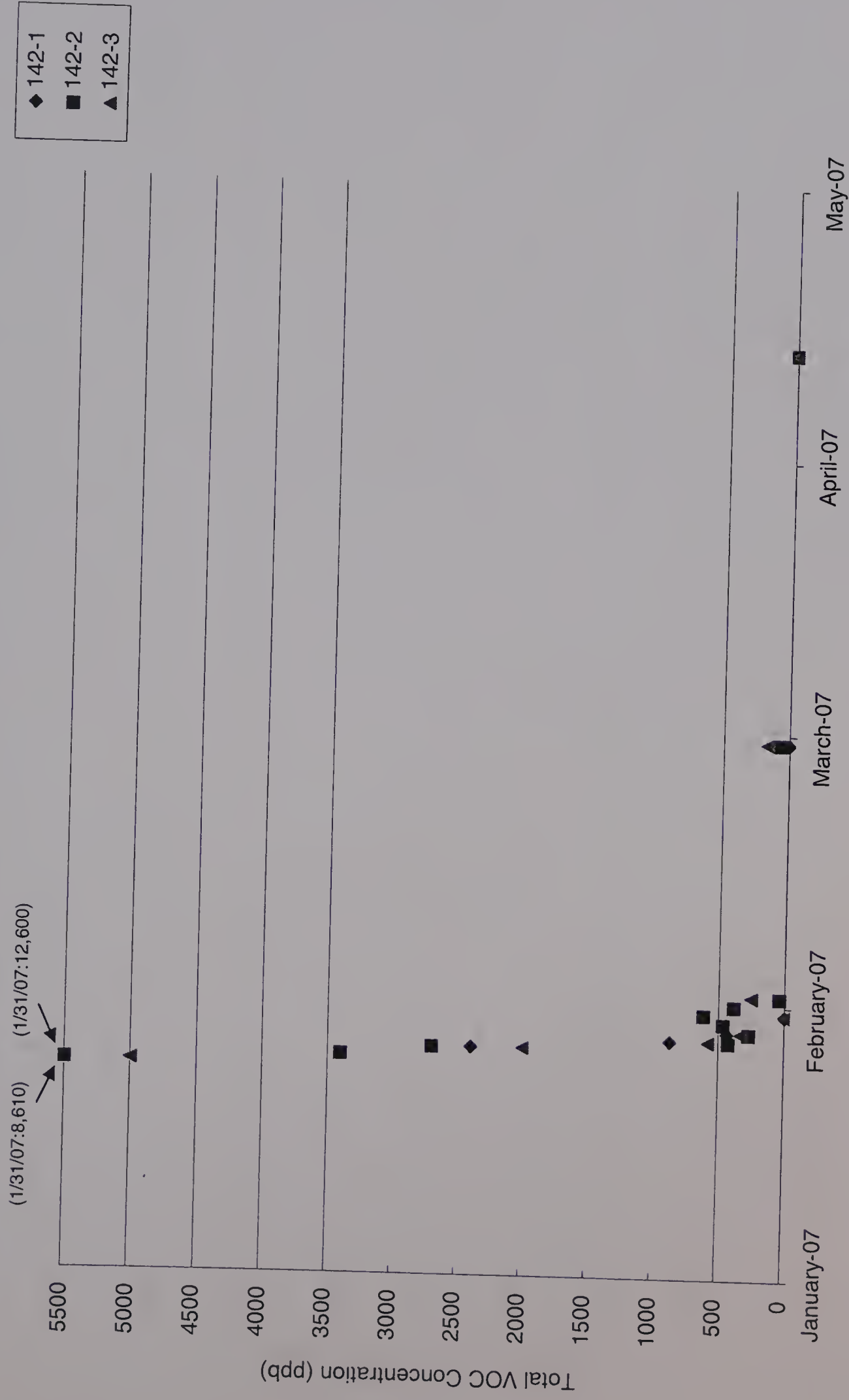
Graph 6

PID Monitoring Data: January 31, 2007 - April 30, 2007
Total VOC Concentrations by PID at Exterior Sub-Slab Monitoring Points - Room 138
Capuano Center
Somerville, MA



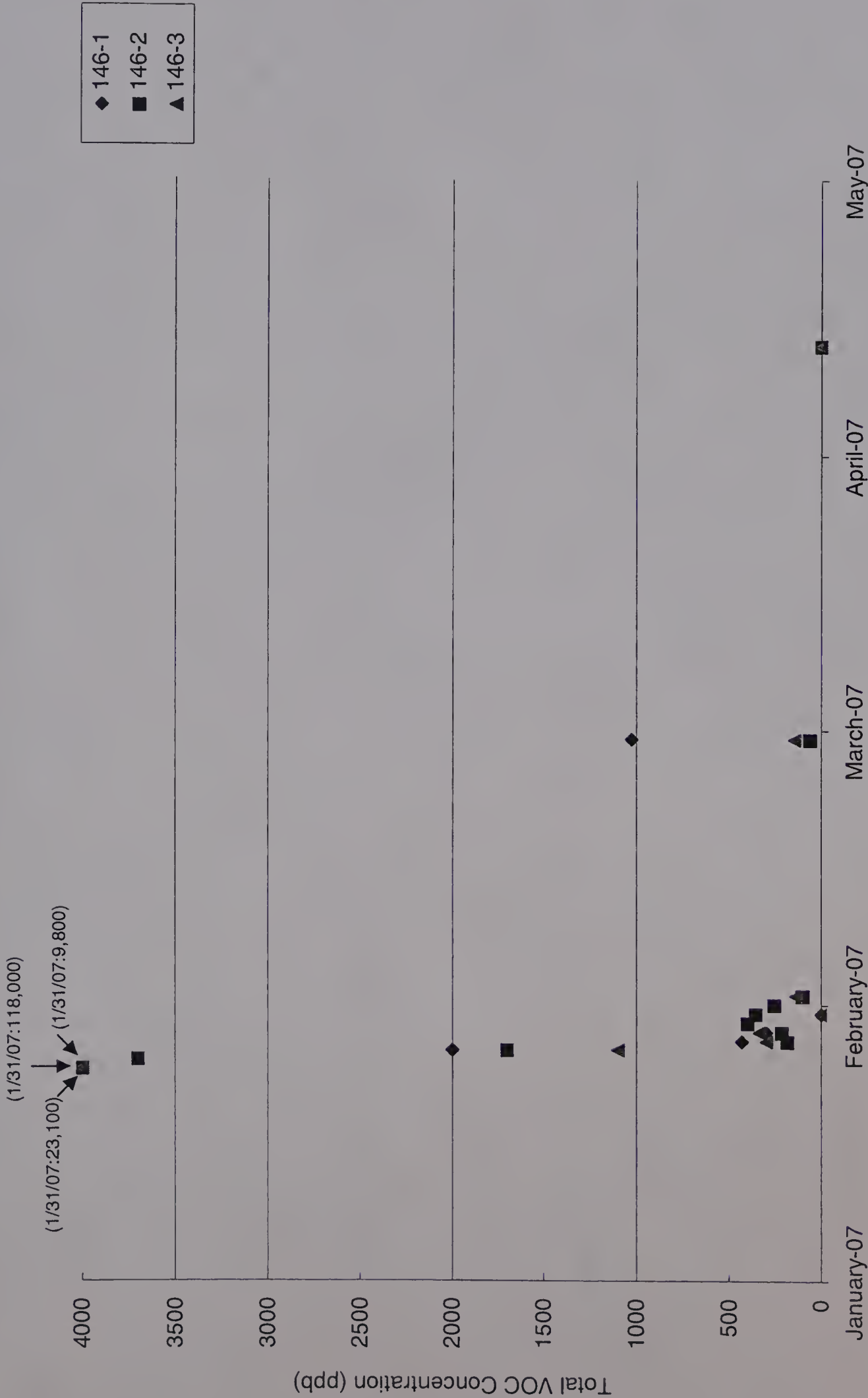
Graph 7

PID Monitoring Data: January 31, 2007 - April 30, 2007
Total VOC Concentrations by PID at Exterior Sub-Slab Monitoring Points - Room 142
Capuano Center
Somerville, MA



Graph 8

PID Monitoring Data: January 31, 2007 - April 30, 2007
Total VOC Concentrations by PID at Exterior Sub-Slab Monitoring Points - Room 146
Capuano Center
Somerville, MA





Geotechnical
Environmental and
Water Resources
Engineering



ATTACHMENT D

Capuano Center SSDS Field Monitoring Reports

Capuano School Sub-Slab Depressurization System Field Monitoring Form

| GENERAL INFORMATION | | | | |
|----------------------------|-----------------------------|--------------------------------|----------------|----------------|
| GEI Field Representatives: | Krista Wolfe Larry Welch | Start-time of monitoring work: | Exterior 17:30 | Interior 15:20 |
| Date: | 02/01/07 | End-time of monitoring work: | 18:05 | 17:30 |
| Weather: | -30°F, sunny | System Status: | ON | |

| INSTRUMENTATION INFORMATION | | | | | |
|---------------------------------|---------------------|-------------------|------------------------|---------------------|----------------------------|
| Instrument | Manufacturer | Model | GEI Identification No. | Calibrant | Successful Calibration |
| PID (ppb) | Pro-Rae Systems | ppb-RAE | PINE | 10 ppm Isobutylene | Yes |
| PID (ppm) | ThermoEnvironmental | 580B | OVM (NH) | 100 ppm Isobutylene | Yes |
| Manometer (in H ₂ O) | Dwyer | Mark III-475-1-FM | NA | NA | Zeroed before each reading |

| FIELD MEASUREMENTS | | | | | |
|---------------------------------------|--|-------------------|---|-------------------------|--|
| Exterior Extraction Monitoring Points | | | System Configuration | | |
| Monitoring Point Identification | Manometer Reading (in. H ₂ O) | PID Reading (ppb) | Extraction Point Valve Identification | Status (on/off?) | |
| 122-1 | NM | NM | 122-1 | ON | |
| 122-2 | -0.23 | 4,300 | 122-2 | ON | |
| 122-3 | NM | NM | 122-3 | ON | |
| 126-1 | NM | NM | 126-1 | ON | |
| 126-2 | -0.20 | 3,100 | 126-2 | ON | |
| 126-3 | NM | NM | 126-3 | ON | |
| 134-1 | NM | NM | 134-1 | ON | |
| 134-2 | -0.34 | 29,000 | 134-2 | ON | |
| 134-3 | NM | NM | 134-3 | ON | |
| 138-1 | NM | NM | 138-1 | ON | |
| 138-2 | -0.37 | 97,000 | 138-2 | ON | |
| 138-3 | NM | NM | 138-3 | ON | |
| 142-1 | NM | NM | 142-1 | ON | |
| 142-2 | -0.23 | 3,400 | 142-2 | ON | |
| 142-3 | NM | NM | 142-3 | ON | |
| 146-1 | NM | NM | 146-1 | ON | |
| 146-2 | -0.19 | 3,700 | 146-2 | ON | |
| 146-3 | NM | NM | 146-3 | ON | |
| Interior Sub-Slab Monitoring Points | | | Interior Ambient Air Measurements | | |
| Monitoring Point Identification | Manometer Reading (in. H ₂ O) | PID Reading (ppb) | Classroom | PJD Reading (ppb) | |
| Room 122A | 0.00 | 492,000 | 122 | 240 | |
| Room 126A | 0.00 | 305,000 | 126 | 208 | |
| Room 133A | 0.00 | 975,000 | 134 | 336 | |
| Room 137A | 0.00 | 1,244,000 | 138 | 740 | |
| Room 142A | 0.00 | 210 | 133 | NM | |
| Room 146A | 0.00 | 331,000 | 137 | NM | |
| | | | 142 | 1,510 | |
| | | | 146 | 199,000 | |
| Blower Enclosure Monitoring Points | | | Effluent Flow | | |
| | Manometer Reading (in. H ₂ O) | PID Reading (ppb) | Manometer Reading (in H ₂ O) | | |
| Manifold 12 ¹ | NM | NM | NM | | |
| Manifold 13 ¹ | NM | NM | NM | | |
| Manifold 14 ¹ | NM | NM | NM | | |
| Combined Influent | NM | NM | NM | | |
| Effluent | NM | NM | NM | Average Flow Rate (cfm) | |
| Blower Condensation Cleanout? | | | NO | | |

Notes:

1. Manifold 12 is the manifold pipe for rooms 122 and 126. Manifold 13 is the manifold pipe for rooms 134 and 138. Manifold 14 is the manifold pipe for rooms 142 and 146.
2. NA = Not Applicable.
3. NM = Not Measured.

Capuano School Sub-Slab Depressurization System Field Monitoring Form

GENERAL INFORMATION

| | | | |
|----------------------------|--------------------|--------------------------------|----------|
| GEI Field Representatives: | Heather Ballantyne | Exterior | Interior |
| | Larry Welch | Start-time of monitoring work: | 14:05 |
| Date: | 02/02/07 | End-time of monitoring work: | 16:05 |
| Weather: | ~35°F, overcast | System Status: | ON |

INSTRUMENTATION INFORMATION

| Instrument | Manufacturer | Model | GEI Identification No. | Calibrant | Successful Calibration |
|---------------------------------|---------------------|-------------------|------------------------|---------------------|----------------------------|
| PID (ppm) | ThermoEnvironmental | 580B | OVM (NH) | 100 ppm Isobutylene | Yes |
| Manometer (in H ₂ O) | Dwyer | Mark III-475-1-FM | NA | NA | Zeroed before each reading |

FIELD MEASUREMENTS

Exterior Extraction Monitoring Points

| Monitoring Point Identification | Manometer Reading (in. H ₂ O) | PID Reading (ppb) |
|---------------------------------|--|-------------------|
| 122-1 | -0.22 | 1,100 |
| 122-2 | -0.21 | 1,100 |
| 122-3 | -0.22 | 1,100 |
| 126-1 | -0.24 | 1,100 |
| 126-2 | -0.20 | 1,100 |
| 126-3 | -0.24 | 1,400 |
| 134-1 | -0.33 | 1,100 |
| 134-2 | -0.35 | 1,400 |
| 134-3 | -0.31 | 1,400 |
| 138-1 | -0.35 | 5,600 |
| 138-2 | -0.36 | 4,600 |
| 138-3 | -0.36 | 3,300 |
| 142-1 | -0.22 | 2,400 |
| 142-2 | -0.22 | 2,700 |
| 142-3 | -0.21 | 2,000 |
| 146-1 | -0.20 | 2,000 |
| 146-2 | -0.20 | 1,700 |
| 146-3 | -0.19 | 1,100 |

System Configuration

| Extraction Point Valve Identification | Status (on/off?) |
|---------------------------------------|------------------|
| 122-1 | ON |
| 122-2 | ON |
| 122-3 | ON |
| 126-1 | ON |
| 126-2 | ON |
| 126-3 | ON |
| 134-1 | ON |
| 134-2 | ON |
| 134-3 | ON |
| 138-1 | ON |
| 138-2 | ON |
| 138-3 | ON |
| 142-1 | ON |
| 142-2 | ON |
| 142-3 | ON |
| 146-1 | ON |
| 146-2 | ON |
| 146-3 | ON |

Interior Sub-Slab Monitoring Points

| Monitoring Point Identification | Manometer Reading (in. H ₂ O) | PID Reading (ppb) |
|---------------------------------|--|-------------------|
| Room 122A | -0.02 | 1,700 |
| Room 126A | -0.01 | 6,200 |
| Room 133A | -0.01 | 4,000 |
| Room 137A | -0.01 | 2,400 |
| Room 142A | 0.00 | 11,100 |
| Room 146A | 0.00 | 47,000 |

Interior Ambient Air Measurements

| Classroom | PID Reading (ppb) |
|-----------|-------------------|
| 122 | 100 |
| 126 | 0 |
| 134 | 0 |
| 138 | 100 |
| 133 | 0 |
| 137 | 0 |
| 142 | 100 |
| 146 | 100 |

Blower Enclosure Monitoring Points

| Monitoring Point Identification | Manometer Reading (in. H ₂ O) | PID Reading (ppb) |
|---------------------------------|--|-------------------|
| Manifold 12 ¹ | -0.34 | 0.0 |
| Manifold 13 ¹ | -0.33 | 0.0 |
| Manifold 14 ¹ | -0.36 | 1,100 |
| Combined Influent | -0.63 | 2,000 |
| Effluent | 0.48 | 1,400 |

Effluent Flow

| Manometer Reading (in H ₂ O) | |
|---|--|
| NM | |
| NM | |
| NM | |
| NM | |
| Average Flow Rate (cfm) | |

Blower Condensation Cleanout?

NO

Notes:

1. Manifold 12 is the manifold pipe for rooms 122 and 126. Manifold 13 is the manifold pipe for rooms 134 and 138. Manifold 14 is the manifold pipe for rooms 142 and 146.
2. NA = Not Applicable.
3. NM = Not Measured.

Capuano School Sub-Slab Depressurization System Field Monitoring Form

| GENERAL INFORMATION | | | | |
|----------------------------|--------------------|--------------------------------|----------|----------|
| GEI Field Representatives: | Heather Ballantyne | | Exterior | Interior |
| Date: | 02/03/07 | Start-time of monitoring work: | 7:47 | 10:15 |
| Weather: | -30°F, sunny | End-time of monitoring work: | 10:15 | 11:47 |
| | | System Status: | ON | |

| INSTRUMENTATION INFORMATION | | | | | |
|---------------------------------|-----------------|-------------------|------------------------|--------------------|----------------------------|
| Instrument | Manufacturer | Model | GEI Identification No. | Calibrant | Successful Calibration |
| PID (ppb) | Pro-Rae Systems | ppb-RAE | PINE | 10 ppm Isobutylene | Yes |
| Manometer (in H ₂ O) | Dwyer | Mark III-475-1-FM | NA | NA | Zeroed before each reading |

| FIELD MEASUREMENTS | | | | | |
|---------------------------------------|--|-------------------|---|-------------------|--|
| Exterior Extraction Monitoring Points | | | System Configuration | | |
| Monitoring Point Identification | Manometer Reading (in. H ₂ O) | PID Reading (ppb) | Extraction Point Valve Identification | Status (on/off?) | |
| 122-1 | -0.23 | 62 | 122-1 | ON | |
| 122-2 | -0.22 | 118 | 122-2 | ON | |
| 122-3 | -0.23 | 124 | 122-3 | ON | |
| 126-1 | -0.22 | 192 | 126-1 | ON | |
| 126-2 | -0.21 | 218 | 126-2 | ON | |
| 126-3 | -0.25 | 109 | 126-3 | ON | |
| 134-1 | -0.34 | 148 | 134-1 | ON | |
| 134-2 | -0.35 | 538 | 134-2 | ON | |
| 134-3 | -0.33 | 373 | 134-3 | ON | |
| 138-1 | -0.37 | 1,428 | 138-1 | ON | |
| 138-2 | -0.37 | 2,522 | 138-2 | ON | |
| 138-3 | -0.37 | 1,758 | 138-3 | ON | |
| 142-1 | -0.25 | 874 | 142-1 | ON | |
| 142-2 | -0.24 | 425 | 142-2 | ON | |
| 142-3 | -0.23 | 583 | 142-3 | ON | |
| 146-1 | -0.20 | 432 | 146-1 | ON | |
| 146-2 | -0.20 | 181 | 146-2 | ON | |
| 146-3 | -0.21 | 296 | 146-3 | ON | |
| Interior Sub-Slab Monitoring Points | | | Interior Ambient Air Measurements | | |
| Monitoring Point Identification | Manometer Reading (in. H ₂ O) | PID Reading (ppb) | Classroom | PID Reading (ppb) | |
| Room 122A | -0.08 | 1,328 | 122 | 0 | |
| Room 126A | -0.01 | 5,468 | 126 | 0 | |
| Room 133A | -0.01 | 2,081 | 134 | 0 | |
| Room 137A | 0.03 | 1,328 | 138 | 10 | |
| Room 142A | 0.00 | 1,743 | 133 | 0 | |
| Room 146A | -0.01 | 2,213 | 137 | 0 | |
| | | | 142 | 0 | |
| | | | 146 | 3 | |
| Blower Enclosure Monitoring Points | | | Effluent Flow | | |
| Monitoring Point Identification | Manometer Reading (in. H ₂ O) | PID Reading (ppb) | Manometer Reading (in H ₂ O) | | |
| Manifold 12 ¹ | -0.41 | 183 | NM | | |
| Manifold 13 ¹ | -0.38 | 652 | NM | | |
| Manifold 14 ¹ | -0.36 | 317 | NM | | |
| Combined Influent | -0.66 | 1,090 | NM | | |
| Effluent | 0.48 | 785 | Average Flow Rate (cfm) | | |
| Blower Condensation Clean-out? | | | No | | |

Notes:

1. Manifold 12 is the manifold pipe for rooms 122 and 126. Manifold 13 is the manifold pipe for rooms 134 and 138. Manifold 14 is the manifold pipe for rooms 142 and 146.
2. NA = Not Applicable.
3. NM = Not Measured.

Capuano School Sub-Slab Depressurization System Field Monitoring Form

GENERAL INFORMATION

GEI Field Representatives: Heather Ballantyne

Date: 02/04/07
Weather: ~15°F, sunny

Start-time of monitoring work:

End-time of monitoring work:

System Status:

Exterior

9:15

11:22

ON

Interior

8:00

9:15

INSTRUMENTATION INFORMATION

| Instrument | Manufacturer | Model | GEI Identification No. | Calibrant | Successful Calibration |
|---------------------------------|-----------------|-------------------|------------------------|--------------------|----------------------------|
| PID (ppb) | Pro-Rae Systems | ppb-RAE | PINE | 10 ppm Isobutylene | Yes |
| Manometer (in H ₂ O) | Dwyer | Mark III-475-1-FM | NA | NA | Zeroed before each reading |

FIELD MEASUREMENTS

Exterior Extraction Monitoring Points

| Monitoring Point Identification | Manometer Reading (in. H ₂ O) | PID Reading (ppb) |
|---------------------------------|--|-------------------|
| 122-1 | -0.23 | 226 |
| 122-2 | -0.22 | 148 |
| 122-3 | -0.23 | 74 |
| 126-1 | -0.22 | 126 |
| 126-2 | -0.21 | 168 |
| 126-3 | -0.26 | 176 |
| 134-1 | -0.34 | 419 |
| 134-2 | -0.39 | 1,056 |
| 134-3 | -0.37 | 381 |
| 138-1 | -0.36 | 1,196 |
| 138-2 | -0.38 | 2,232 |
| 138-3 | -0.38 | 778 |
| 142-1 | -0.26 | 439 |
| 142-2 | -0.24 | 270 |
| 142-3 | -0.22 | 330 |
| 146-1 | -0.22 | 296 |
| 146-2 | -0.19 | 212 |
| 146-3 | -0.22 | 336 |

System Configuration

| Extraction Point Valve Identification | Status (on/off?) |
|---------------------------------------|------------------|
| 122-1 | ON |
| 122-2 | ON |
| 122-3 | ON |
| 126-1 | ON |
| 126-2 | ON |
| 126-3 | ON |
| 134-1 | ON |
| 134-2 | ON |
| 134-3 | ON |
| 138-1 | ON |
| 138-2 | ON |
| 138-3 | ON |
| 142-1 | ON |
| 142-2 | ON |
| 142-3 | ON |
| 146-1 | ON |
| 146-2 | ON |
| 146-3 | ON |

Interior Sub-Slab Monitoring Points

| Monitoring Point Identification | Manometer Reading (in. H ₂ O) | PID Reading (ppb) |
|---------------------------------|--|-------------------|
| Room 122A | -0.01 | 746 |
| Room 126A | -0.02 | 4,750 |
| Room 133A | 0.00 | 297 |
| Room 137A | 0.00 | 652 |
| Room 142A | 0.00 | 1,255 |
| Room 146A | 0.00 | 2,565 |

Interior Ambient Air Measurements

| Classroom | PID Reading (ppb) |
|-----------|-------------------|
| 122 | 0 |
| 126 | 0 |
| 134 | 0 |
| 138 | 0 |
| 133 | 0 |
| 137 | 0 |
| 142 | 0 |
| 146 | 0 |

Blower Enclosure Monitoring Points

| Monitoring Point Identification | Manometer Reading (in. H ₂ O) | PID Reading (ppb) |
|---------------------------------|--|-------------------|
| Manifold 12 ¹ | -0.38 | 241 |
| Manifold 13 ¹ | -0.36 | 436 |
| Manifold 14 ¹ | -0.36 | 328 |
| Combined Influent | -0.63 | 528 |
| Effluent | 0.53 | 456 |

Effluent Flow

| Manometer Reading (in H ₂ O) | |
|---|-------------------------|
| NM | |
| NM | |
| NM | |
| NM | Average Flow Rate (cfm) |

Blower Condensation Cleanout?

NO

Notes:

1. Manifold 12 is the manifold pipe for rooms 122 and 126. Manifold 13 is the manifold pipe for rooms 134 and 138. Manifold 14 is the manifold pipe for rooms 142 and 146.
2. NA = Not Applicable.
3. NM = Not Measured.

Capuano School Sub-Slab Depressurization System Field Monitoring Form

| GENERAL INFORMATION | | | | |
|----------------------------|-----------------------------|--------------------------------|-------|----------|
| GEI Field Representatives: | | Heather Ballantyne | | |
| Date: | 02/05/07 | Start-time of monitoring work: | 14:30 | Exterior |
| Weather: | -15°F, windy, partly cloudy | End-time of monitoring work: | 15:50 | Interior |
| | | System Status: | ON | |

| INSTRUMENTATION INFORMATION | | | | | |
|---------------------------------|-----------------|-------------------|------------------------|--------------------|----------------------------|
| Instrument | Manufacturer | Model | GEI Identification No. | Calibrant | Successful Calibration |
| PID (ppb) | Pro-Rae Systems | ppb-RAE | PINE | 10 ppm Isobutylene | Yes |
| Manometer (in H ₂ O) | Dwyer | Mark III-475-1-FM | NA | NA | Zeroed before each reading |

| FIELD MEASUREMENTS | | | | | |
|---------------------------------------|--|-------------------|---|-------------------|--|
| Exterior Extraction Monitoring Points | | | System Configuration | | |
| Monitoring Point Identification | Manometer Reading (in. H ₂ O) | PID Reading (ppb) | Extraction Point Valve Identification | Status (on/off?) | |
| 122-1 | NM | NM | 122-1 | ON | |
| 122-2 | -0.22 | 74 | 122-2 | ON | |
| 122-3 | NM | NM | 122-3 | ON | |
| 126-1 | NM | NM | 126-1 | ON | |
| 126-2 | -0.24 | 149 | 126-2 | ON | |
| 126-3 | NM | NM | 126-3 | ON | |
| 134-1 | NM | NM | 134-1 | ON | |
| 134-2 | -0.39 | 355 | 134-2 | ON | |
| 134-3 | NM | NM | 134-3 | ON | |
| 138-1 | -0.37 | 1,517 | 138-1 | ON | |
| 138-2 | -0.39 | 1,164 | 138-2 | ON | |
| 138-3 | -0.36 | 921 | 138-3 | ON | |
| 142-1 | NM | NM | 142-1 | ON | |
| 142-2 | -0.21 | 467 | 142-2 | ON | |
| 142-3 | NM | NM | 142-3 | ON | |
| 146-1 | NM | NM | 146-1 | ON | |
| 146-2 | -0.19 | 398 | 146-2 | ON | |
| 146-3 | NM | NM | 146-3 | ON | |
| Interior Sub-Slab Monitoring Points | | | Interior Ambient Air Measurements | | |
| Monitoring Point Identification | Manometer Reading (in. H ₂ O) | PID Reading (ppb) | Classroom | PID Reading (ppb) | |
| Room 122A | -0.02 | 272 | 122 | 0 | |
| Room 126A | -0.01 | 1,951 | 126 | 0 | |
| Room 133A | 0.00 | 1,164 | 134 | 0 | |
| Room 137A | 0.00 | 1,595 | 138 | 0 | |
| Room 142A | 0.00 | 1,955 | 133 | 0 | |
| Room 146A | -0.01 | 1,538 | 137 | 0 | |
| | | | 142 | 0 | |
| | | | 146 | 1 | |
| Blower Enclosure Monitoring Points | | | Effluent Flow | | |
| Monitoring Point Identification | Manometer Reading (in. H ₂ O) | PID Reading (ppb) | Manometer Reading (in H ₂ O) | | |
| Manifold 12 ¹ | -0.38 | 213 | NM | | |
| Manifold 13 ¹ | -0.38 | 474 | NM | | |
| Manifold 14 ¹ | -0.38 | 412 | NM | | |
| Combined Influent | -0.63 | 483 | NM | | |
| Effluent | 0.59 | 472 | Average Flow Rate (cfm) | | |
| Blower Condensation Cleanout? | | | NO | | |

- Notes:
1. Manifold 12 is the manifold pipe for rooms 122 and 126. Manifold 13 is the manifold pipe for rooms 134 and 138. Manifold 14 is the manifold pipe for rooms 142 and 146.
 2. NA = Not Applicable.
 3. NM = Not Measured.

Capuano School Sub-Slab Depressurization System Field Monitoring Form

| GENERAL INFORMATION | | | | |
|----------------------------|------------------------------------|--------------------------------|-------------------|-------------------|
| GEI Field Representatives: | Heather Ballantyne Krista Wolfe | Start-time of monitoring work: | Exterior 15:15 | Interior 16:30 |
| Date: | 02/06/07 | End-time of monitoring work: | 16:30 | 17:30 |
| Weather: | ~25°F, clear | System Status: | ON | |

| INSTRUMENTATION INFORMATION | | | | | |
|---------------------------------|-----------------|-------------------|------------------------|--------------------|----------------------------|
| Instrument | Manufacturer | Model | GEI Identification No. | Calibrant | Successful Calibration |
| PID (ppb) | Pro-Rae Systems | ppb-RAE | PINE | 10 ppm Isobutylene | Yes |
| Manometer (in H ₂ O) | Dwyer | Mark III-475-1-FM | NA | NA | Zeroed before each reading |

| FIELD MEASUREMENTS | | |
|--|--|-------------------|
| Exterior Extraction Monitoring Points | | |
| Monitoring Point Identification | Manometer Reading (in. H ₂ O) | PID Reading (ppb) |
| 122-1 | NM | NM |
| 122-2 | -0.23 | 368 |
| 122-3 | NM | NM |
| 126-1 | NM | NM |
| 126-2 | -0.22 | 512 |
| 126-3 | NM | NM |
| 134-1 | NM | NM |
| 134-2 | -0.36 | 375 |
| 134-3 | NM | NM |
| 138-1 | -0.38 | 722 |
| 138-2 | -0.36 | 798 |
| 138-3 | -0.36 | 589 |
| 142-1 | NM | NM |
| 142-2 | -0.24 | 618 |
| 142-3 | NM | NM |
| 146-1 | NM | NM |
| 146-2 | -0.21 | 355 |
| 146-3 | NM | NM |
| Interior Sub-Slab Monitoring Points | | |
| Monitoring Point Identification | Manometer Reading (in. H ₂ O) | PID Reading (ppb) |
| Room 122A | 0.00 | 613 |
| Room 126A | 0.00 | 3563 |
| Room 133A | 0.00 | 1299 |
| Room 137A | 0.00 | 1967 |
| Room 142A | 0.00 | 2412 |
| Room 146A | 0.00 | 12,100 |
| Blower Enclosure Monitoring Points | | |
| | Manometer Reading (in. H ₂ O) | PID Reading (ppb) |
| Manifold 12 ¹ | -0.36 | 285 |
| Manifold 13 ¹ | -0.39 | 4479 |
| Manifold 14 ¹ | -0.36 | 787 |
| Combined Influent | -0.65 | 633 |
| Effluent | 0.59 | 669 |
| Blower Condensation Cleanout? <u>YES</u> | | |
| System Configuration | | |
| Extraction Point Valve Identification | Status (on/off?) | |
| 122-1 | ON | |
| 122-2 | ON | |
| 122-3 | ON | |
| 126-1 | ON | |
| 126-2 | ON | |
| 126-3 | ON | |
| 134-1 | ON | |
| 134-2 | ON | |
| 134-3 | ON | |
| 138-1 | ON | |
| 138-2 | ON | |
| 138-3 | ON | |
| 142-1 | ON | |
| 142-2 | ON | |
| 142-3 | ON | |
| 146-1 | ON | |
| 146-2 | ON | |
| 146-3 | ON | |
| Interior Ambient Air Measurements | | |
| Classroom | PID Reading (ppb) | |
| 122 | 0 | |
| 126 | 0 | |
| 134 | 0 | |
| 138 | 0 | |
| 133 | 0 | |
| 137 | 4 | |
| 142 | 8 | |
| 146 | 9 | |
| Effluent Flow | | |
| Manometer Reading (in H ₂ O) | Average Flow Rate (cfm) | |
| 0.05 | | |
| 0.10 | | |
| 0.11 | | |
| 99.9 | | |

Notes:
 1. Manifold 12 is the manifold pipe for rooms 122 and 126. Manifold 13 is the manifold pipe for rooms 134 and 138. Manifold 14 is the manifold pipe for rooms 142 and 146.
 2. NA = Not Applicable.
 3. NM = Not Measured.

Capuano School Sub-Slab Depressurization System Field Monitoring Form

| GENERAL INFORMATION | | | | | |
|----------------------------|--------------|--------------------------------|----------------|----------|----------|
| GEI Field Representatives: | | Heather Ballantyne | | Exterior | Interior |
| Date: | 02/07/07 | Start-time of monitoring work: | 19:30 | 15:30 | |
| Weather: | -20°F, clear | End-time of monitoring work: | 20:30 | 15:37 | |
| | | | System Status: | ON | |

| INSTRUMENTATION INFORMATION | | | | | |
|---------------------------------|-----------------|---------------------|------------------------|--------------------|----------------------------|
| Instrument | Manufacturer | Model | GEI Identification No. | Calibrant | Successful Calibration |
| PID (ppb) | Pro-Rae Systems | ppb-RAE | PINE | 10 ppm Isobutylene | Yes |
| Manometer (in H ₂ O) | Dwyer | Mark III-475-000-FM | NA | NA | Zeroed before each reading |

| FIELD MEASUREMENTS | | | | | |
|---------------------------------------|--|-------------------|---|-------------------|--|
| Exterior Extraction Monitoring Points | | | System Configuration | | |
| Monitoring Point Identification | Manometer Reading (in. H ₂ O) | PID Reading (ppb) | Extraction Point Valve Identification | Status (on/off?) | |
| 122-1 | NM | NM | 122-1 | ON | |
| 122-2 | -0.236 | 220 | 122-2 | ON | |
| 122-3 | NM | NM | 122-3 | ON | |
| 126-1 | NM | NM | 126-1 | ON | |
| 126-2 | -0.216 | 166 | 126-2 | ON | |
| 126-3 | NM | NM | 126-3 | ON | |
| 134-1 | NM | NM | 134-1 | ON | |
| 134-2 | -0.371 | 544 | 134-2 | ON | |
| 134-3 | NM | NM | 134-3 | ON | |
| 138-1 | -0.386 | 1073 | 138-1 | ON | |
| 138-2 | -0.379 | 695 | 138-2 | ON | |
| 138-3 | -0.388 | 622 | 138-3 | ON | |
| 142-1 | NM | NM | 142-1 | ON | |
| 142-2 | -0.237 | 386 | 142-2 | ON | |
| 142-3 | NM | NM | 142-3 | ON | |
| 146-1 | NM | NM | 146-1 | ON | |
| 146-2 | -0.211 | 254 | 146-2 | ON | |
| 146-3 | NM | NM | 146-3 | ON | |
| Interior Sub-Slab Monitoring Points | | | Interior Ambient Air Measurements | | |
| Monitoring Point Identification | Manometer Reading (in. H ₂ O) | PID Reading (ppb) | Classroom | PID Reading (ppb) | |
| Room 122A | NM | NM | 122 | 0 | |
| Room 126A | NM | NM | 126 | 0 | |
| Room 133A | NM | NM | 134 | 0 | |
| Room 137A | NM | NM | 138 | 0 | |
| Room 142A | NM | NM | 133 | 0 | |
| Room 146A | NM | NM | 137 | 2 | |
| | | | 142 | 0 | |
| | | | 146 | 0 | |
| Blower Enclosure Monitoring Points | | | Effluent Flow | | |
| | Manometer Reading (in. H ₂ O) | PID Reading (ppb) | Manometer Reading (in H ₂ O) | | |
| Manifold 12 ¹ | -0.367 | 1715 | 0.140 | | |
| Manifold 13 ¹ | -0.353 | 993 | 0.053 | | |
| Manifold 14 ¹ | -0.391 | 1385 | 0.059 | | |
| Combined Influent | -0.651 | 738 | 99 | | |
| Effluent | 0.547 | 979 | Average Flow Rate (cfm) | | |
| Blower Condensation Cleanout? | | | YES | | |

Notes:

1. Manifold 12 is the manifold pipe for rooms 122 and 126. Manifold 13 is the manifold pipe for rooms 134 and 138. Manifold 14 is the manifold pipe for rooms 142 and 146.
2. NA = Not Applicable.
3. NM = Not Measured.
4. Interior sub-slab monitoring points not measured due to indoor air testing today.

Capuano School Sub-Slab Depressurization System Field Monitoring Form

| | | | | |
|---|--|--|--|--|
| GENERAL INFORMATION | | | | |
| GEI Field Representatives: Krista Wolfe | | Start-time of monitoring work: Exterior 17:00 Interior 14:30 | | |
| Date: 02/08/07 | | End-time of monitoring work: 19:00 17:00 | | |
| Weather: -25°F, cloudy | | System Status: ON | | |

| | | | | | |
|---------------------------------|-----------------|---------------------|------------------------|--------------------|----------------------------|
| INSTRUMENTATION INFORMATION | | | | | |
| Instrument | Manufacturer | Model | GEI Identification No. | Calibrant | Successful Calibration |
| PID (ppb) | Pro-Rae Systems | ppb-RAE | PINE | 10 ppm Isobutylene | Yes |
| Manometer (in H ₂ O) | Dwyer | Mark III-475-000-FM | NA | NA | Zeroed before each reading |

| | | |
|---|--|-------------------|
| FIELD MEASUREMENTS | | |
| Exterior Extraction Monitoring Points | | |
| Monitoring Point Identification | Manometer Reading (in. H ₂ O) | PID Reading (ppb) |
| 122-1 | -0.229 | 3420 |
| 122-2 | -0.234 | 263 |
| 122-3 | -0.239 | 505 |
| 126-1 | -0.244 | 244 |
| 126-2 | -0.215 | 311 |
| 126-3 | -0.264 | 629 |
| 134-1 | -0.356 | 123 |
| 134-2 | -0.361 | 1488 |
| 134-3 | -0.36 | 34 |
| 138-1 | -0.367 | 1004 |
| 138-2 | -0.379 | 399 |
| 138-3 | -0.376 | 160 |
| 142-1 | -0.245 | 43 |
| 142-2 | -0.247 | 38 |
| 142-3 | -0.239 | 254 |
| 146-1 | -0.211 | 102 |
| 146-2 | -0.212 | 100 |
| 146-3 | -0.234 | 137 |
| System Configuration | | |
| Extraction Point Valve Identification | Status (on/off?) | |
| 122-1 | ON | |
| 122-2 | ON | |
| 122-3 | ON | |
| 126-1 | ON | |
| 126-2 | ON | |
| 126-3 | ON | |
| 134-1 | ON | |
| 134-2 | ON | |
| 134-3 | ON | |
| 138-1 | ON | |
| 138-2 | ON | |
| 138-3 | ON | |
| 142-1 | ON | |
| 142-2 | ON | |
| 142-3 | ON | |
| 146-1 | ON | |
| 146-2 | ON | |
| 146-3 | ON | |
| Interior Sub-Slab Monitoring Points | | |
| Monitoring Point Identification | Manometer Reading (in. H ₂ O) | PID Reading (ppb) |
| Room 122A | -0.009 | 974 |
| Room 126A | 0.000 | 3392 |
| Room 133A | 0.000 | 933 |
| Room 137A | 0.000 | 1399 |
| Room 142A | 0.000 | 786 |
| Room 146A | -0.003 | 4395 |
| Interior Ambient Air Measurements | | |
| Classroom | PID Reading (ppb) | |
| 122 | 0 | |
| 126 | 0 | |
| 134 | 0 | |
| 138 | 0 | |
| 133 | 0 | |
| 137 | 3 | |
| 142 | 0 | |
| 146 | 0 | |
| Blower Enclosure Monitoring Points | | |
| | Manometer Reading (in. H ₂ O) | PID Reading (ppb) |
| Manifold 12 ¹ | -0.362 | 118 |
| Manifold 13 ¹ | -0.357 | 147 |
| Manifold 14 ¹ | -0.392 | 153 |
| Combined Influent | -0.666 | 192 |
| Effluent | -0.506 | 180 |
| Effluent Flow | | |
| Manometer Reading (in H ₂ O) | | |
| 0.072 | | |
| 0.098 | | |
| 0.113 | | |
| 103.4 | Average Flow Rate (cfm) | |
| Blower Condensation Cleanout? YES | | |

Notes:

1. Manifold 12 is the manifold pipe for rooms 122 and 126. Manifold 13 is the manifold pipe for rooms 134 and 138. Manifold 14 is the manifold pipe for rooms 142 and 146.

2. NA = Not Applicable.

3. NM = Not Measured.

4. Sub-slab soil gas samples collected today.

Capuano School Sub-Slab Depressurization System Field Monitoring Form

| GENERAL INFORMATION | | | | | |
|----------------------------|---------------------------------|---------------------------------------|--|----------|----------|
| GEI Field Representatives: | | Heather Ballantyne Samantha Slater | | Exterior | Interior |
| Date: | 03/08/07 | Start-time of monitoring work: | | 21:00 | 21:45 |
| Weather: | ~15°F, windy, slightly overcast | End-time of monitoring work: | | 21:45 | 22:00 |
| | | System Status: | | ON | |

| INSTRUMENTATION INFORMATION | | | | | |
|---------------------------------|-----------------|----------------------|------------------------|--------------------|----------------------------|
| Instrument | Manufacturer | Model | GEI Identification No. | Calibrant | Successful Calibration |
| PID (ppb) | Pro-Rae Systems | ppb-RAE | PINE | 10 ppm Isobutylene | Yes |
| Manometer (in H ₂ O) | Dwyer | Mark III-475-0000-FM | NA | NA | Zeroed before each reading |

| FIELD MEASUREMENTS | | |
|---|--|-------------------|
| Exterior Extraction Monitoring Points | | |
| Monitoring Point Identification | Manometer Reading (in. H ₂ O) | PID Reading (ppb) |
| 122-1 | -0.219 | 99 |
| 122-2 | -0.22 | 470 |
| 122-3 | -0.236 | 95 |
| 126-1 | -0.265 | 302 |
| 126-2 | -0.222 | 86 |
| 126-3 | -0.259 | 0 |
| 134-1 | -0.341 | 0 |
| 134-2 | -0.391 | 124 |
| 134-3 | -0.397 | 37 |
| 138-1 | -0.382 | 746 |
| 138-2 | -0.407 | 125 |
| 138-3 | -0.364 | 61 |
| 142-1 | -0.268 | 4 |
| 142-2 | -0.136 | 65 |
| 142-3 | -0.254 | 167 |
| 146-1 | -0.227 | 1028 |
| 146-2 | -0.223 | 60 |
| 146-3 | -0.228 | 146 |
| System Configuration | | |
| Extraction Point Valve Identification | Status (on/off?) | |
| 122-1 | ON | |
| 122-2 | ON | |
| 122-3 | ON | |
| 126-1 | ON | |
| 126-2 | ON | |
| 126-3 | ON | |
| 134-1 | ON | |
| 134-2 | ON | |
| 134-3 | ON | |
| 138-1 | ON | |
| 138-2 | ON | |
| 138-3 | ON | |
| 142-1 | ON | |
| 142-2 | ON | |
| 142-3 | ON | |
| 146-1 | ON | |
| 146-2 | ON | |
| 146-3 | ON | |
| Interior Sub-Slab Monitoring Points | | |
| Monitoring Point Identification | Manometer Reading (in. H ₂ O) | PID Reading (ppb) |
| Room 122A | -0.009 | 417 |
| Room 126A | 0.000 | 580 |
| Room 133A | 0.000 | 441 |
| Room 137A | 0.003 | 270 |
| Room 142A | 0.000 | 151 |
| Room 146A | -0.004 | 1176 |
| Interior Ambient Air Measurements | | |
| Classroom | PID Reading (ppb) | |
| 122 | 0 | |
| 126 | 0 | |
| 134 | 0 | |
| 138 | 0 | |
| 133 | 0 | |
| 137 | 0 | |
| 142 | 0 | |
| 146 | 0 | |
| Blower Enclosure Monitoring Points | | |
| | Manometer Reading (in. H ₂ O) | PID Reading (ppb) |
| Manifold 12 ¹ | -0.361 | 958 |
| Manifold 13 ¹ | -0.372 | 425 |
| Manifold 14 ¹ | -0.356 | 602 |
| Combined Influent | -0.61 | 534 |
| Effluent | -0.625 | 428 |
| Effluent Flow | | |
| Manometer Reading (in H ₂ O) | | |
| 0.069 | | |
| 0.099 | | |
| 0.106 | | |
| 0.109 | | |
| 106 | Average Flow Rate (cfm) | |
| Blower Condensation Cleanout? <u>NO (dry)</u> | | |

Notes:
1. Manifold 12 is the manifold pipe for rooms 122 and 126. Manifold 13 is the manifold pipe for rooms 134 and 138. Manifold 14 is the manifold pipe for rooms 142 and 146.
2. NA = Not Applicable.
3. NM = Not Measured.
4. Effluent flow is measured with a pitot tube and manometer at 4 different points within the effluent pipe.

Capuano School Sub-Slab Depressurization System Field Monitoring Form

| GENERAL INFORMATION | | | | |
|---|--|--------------------------------|-------------------|-------------------|
| GEI Field Representatives: H. Ballantyne S. Slater | | Start-time of monitoring work: | Exterior 11:25 | Interior 12:25 |
| Date: 04/20/07 | | End-time of monitoring work: | 12:25 | 13:45 |
| Weather: ~50°F, sunny | | System Status: | ON | |

| INSTRUMENTATION INFORMATION | | | | | |
|---------------------------------|-----------------|----------------------|------------------------|--------------------|----------------------------|
| Instrument | Manufacturer | Model | GEI Identification No. | Calibrant | Successful Calibration |
| PID (ppb) | Pro-Rae Systems | ppb-RAE | PINE | 10 ppm Isobutylene | Yes |
| Manometer (in H ₂ O) | Dwyer | Mark III-475-0000-FM | NA | NA | Zeroed before each reading |

FIELD MEASUREMENTS

Exterior Extraction Monitoring Points

| Monitoring Point Identification | Manometer Reading (in. H ₂ O) | PID Reading (ppb) |
|---------------------------------|--|-------------------|
| 122-1 | -0.203 | 0 |
| 122-2 | -0.197 | 0 |
| 122-3 | -0.213 | 0 |
| 126-1 | -0.237 | 0 |
| 126-2 | -0.216 | 0 |
| 126-3 | -0.248 | 0 |
| 134-1 | -0.323 | 1450 |
| 134-2 | -0.353 | 419 |
| 134-3 | -0.305 | 28 |
| 138-1 | -0.35 | 250 |
| 138-2 | -0.361 | 149 |
| 138-3 | -0.354 | 236 |
| 142-1 | -0.242 | 0 |
| 142-2 | -0.223 | 0 |
| 142-3 | -0.216 | 0 |
| 146-1 | -0.208 | 0 |
| 146-2 | -0.198 | 0 |
| 146-3 | -0.206 | 0 |

System Configuration

| Extraction Point Valve Identification | Status (on/off?) |
|---------------------------------------|------------------|
| 122-1 | ON |
| 122-2 | ON |
| 122-3 | ON |
| 126-1 | ON |
| 126-2 | ON |
| 126-3 | ON |
| 134-1 | ON |
| 134-2 | ON |
| 134-3 | ON |
| 138-1 | ON |
| 138-2 | ON |
| 138-3 | ON |
| 142-1 | ON |
| 142-2 | ON |
| 142-3 | ON |
| 146-1 | ON |
| 146-2 | ON |
| 146-3 | ON |

Interior Sub-Slab Monitoring Points

| Monitoring Point Identification | Manometer Reading (in. H ₂ O) | PID Reading (ppb) |
|---------------------------------|--|-------------------|
| Room 122A | -0.010 | 195 |
| Room 126A | 0.000 | 14,000 |
| Room 133A | 0.000 | 4145 |
| Room 137A | 0.000 | 6150 |
| Room 142A | 0.000 | 1250 |
| Room 146A | -0.003 | 3725 |

Interior Ambient Air Measurements:

| Classroom | PID Reading (ppb) |
|-----------|-------------------|
| 122 | 0 |
| 126 | 0 |
| 134 | 0 |
| 138 | 0 |
| 133 | 0 |
| 137 | 0 |
| 142 | 0 |
| 146 | 0 |

Blower Enclosure Monitoring Points

| | Manometer Reading (in. H ₂ O) | PID Reading (ppb) |
|--------------------------|--|-------------------|
| Manifold 12 ¹ | -0.36 | 37 |
| Manifold 13 ¹ | -0.345 | 169 |
| Manifold 14 ¹ | -0.358 | 152 |
| Combined Influent | -0.629 | 151 |
| Effluent | -0.642 | 128 |

Effluent Flow

| Manometer Reading (in H ₂ O) | |
|---|-----------------|
| 0.038 | |
| 0.112 | |
| 0.198 | |
| 0.077 | |
| 109 | Flow Rate (cfm) |

| | |
|-------------------------------|-----------|
| Blower Condensation Cleanout? | YES (dry) |
|-------------------------------|-----------|

- Notes:
- 1. Manifold 12 is the manifold pipe for rooms 122 and 126. Manifold 13 is the manifold pipe for rooms 134 and 138. Manifold 14 is the manifold pipe for rooms 142 and 146.
 - 2. NA = Not Applicable.
 - 3. NM = Not Measured.
 - 4. Effluent flow is measured with a pitot tube and manometer at 4 different points within the effluent pipe.

